TABLE 15-continued

| $R^2$ | $R^3$ | $R^6$ | X | Base |
|---|---|---|---|---|
| H | acyl | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| H | acyl | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| H | acyl | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| H | acyl | $CH_3$ | S | 2-amino-8-methyladenine |
| H | acyl | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| H | acyl | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| H | acyl | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| H | acyl | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| H | acyl | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| H | acyl | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| H | acyl | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| H | acyl | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| H | acyl | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| H | amino acid | $CH_3$ | S | 6-Methylthymine |
| H | amino acid | $CH_3$ | S | 6-Methyluracil |
| H | amino acid | $CH_3$ | S | 8-Methylguanine |
| H | amino acid | $CH_3$ | S | 6-Methylcytosine |
| H | amino acid | $CH_3$ | S | 8-Methyladenine |
| H | amino acid | $CH_3$ | S | 8-Methylhypoxanthine |
| H | amino acid | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| H | amino acid | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| H | amino acid | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| H | amino acid | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| H | amino acid | $CH_3$ | S | 2-amino-8-methyladenine |
| H | amino acid | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| H | amino acid | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| H | amino acid | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| H | amino acid | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| H | amino acid | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| H | amino acid | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| H | amino acid | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| H | amino acid | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| H | amino acid | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | amino acid | $CH_3$ | S | 6-Methylthymine |
| amino acid | amino acid | $CH_3$ | S | 6-Methyluracil |
| amino acid | amino acid | $CH_3$ | S | 8-Methylguanine |
| amino acid | amino acid | $CH_3$ | S | 6-Methylcytosine |
| amino acid | amino acid | $CH_3$ | S | 8-Methyladenine |
| amino acid | amino acid | $CH_3$ | S | 8-Methylhypoxanthine |
| amino acid | amino acid | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | amino acid | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | amino acid | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | amino acid | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | amino acid | $CH_3$ | S | 2-amino-8-methyladenine |
| amino acid | amino acid | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | amino acid | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | amino acid | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | amino acid | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | amino acid | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | amino acid | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | amino acid | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | amino acid | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | amino acid | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | H | $CH_3$ | S | 6-Methylthymine |
| amino acid | H | $CH_3$ | S | 6-Methyluracil |
| amino acid | H | $CH_3$ | S | 8-Methylguanine |
| amino acid | H | $CH_3$ | S | 6-Methylcytosine |
| amino acid | H | $CH_3$ | S | 8-Methyladenine |
| amino acid | H | $CH_3$ | S | 8-Methylhypoxanthine |
| amino acid | H | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | H | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | H | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | H | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | H | $CH_3$ | S | 2-amino-8-methyladenine |
| amino acid | H | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | H | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | H | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | H | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | H | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | H | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | H | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | H | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | H | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | acyl | $CH_3$ | S | 6-Methylthymine |
| amino acid | acyl | $CH_3$ | S | 6-Methyluracil |
| amino acid | acyl | $CH_3$ | S | 8-Methylguanine |
| amino acid | acyl | $CH_3$ | S | 6-Methylcytosine |

TABLE 15-continued

| $R^2$ | $R^3$ | $R^6$ | X | Base |
|---|---|---|---|---|
| amino acid | acyl | $CH_3$ | S | 8-Methyladenine |
| amino acid | acyl | $CH_3$ | S | 8-Methylhypoxanthine |
| amino acid | acyl | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | acyl | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | acyl | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | acyl | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | acyl | $CH_3$ | S | 2-amino-8-methyladenine |
| amino acid | acyl | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | acyl | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | acyl | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | acyl | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | acyl | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | acyl | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | acyl | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | acyl | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | acyl | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | H | $CF_3$ | S | 6-Methylthymine |
| acyl | H | $CF_3$ | S | 6-Methyluracil |
| acyl | H | $CF_3$ | S | 8-Methylguanine |
| acyl | H | $CF_3$ | S | 6-Methylcytosine |
| acyl | H | $CF_3$ | S | 8-Methyladenine |
| acyl | H | $CF_3$ | S | 8-Methylhypoxanthine |
| acyl | H | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | H | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | H | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | H | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | H | $CF_3$ | S | 2-amino-8-methyladenine |
| acyl | H | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | H | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | H | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | H | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | H | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | H | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | H | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | H | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | H | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | acyl | $CF_3$ | S | 6-Methylthymine |
| acyl | acyl | $CF_3$ | S | 6-Methyluracil |
| acyl | acyl | $CF_3$ | S | 8-Methylguanine |
| acyl | acyl | $CF_3$ | S | 6-Methylcytosine |
| acyl | acyl | $CF_3$ | S | 8-Methyladenine |
| acyl | acyl | $CF_3$ | S | 8-Methylhypoxanthine |
| acyl | acyl | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | acyl | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | acyl | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | acyl | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | acyl | $CF_3$ | S | 2-amino-8-methyladenine |
| acyl | acyl | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | acyl | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | acyl | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | acyl | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | acyl | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | acyl | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | acyl | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | acyl | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | acyl | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | amino acid | $CF_3$ | S | 6-Methylthymine |
| acyl | amino acid | $CF_3$ | S | 6-Methyluracil |
| acyl | amino acid | $CF_3$ | S | 8-Methylguanine |
| acyl | amino acid | $CF_3$ | S | 6-Methylcytosine |
| acyl | amino acid | $CF_3$ | S | 8-Methyladenine |
| acyl | amino acid | $CF_3$ | S | 8-Methylhypoxanthine |
| acyl | amino acid | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | amino acid | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | amino acid | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | amino acid | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | amino acid | $CF_3$ | S | 2-amino-8-methyladenine |
| acyl | amino acid | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | amino acid | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | amino acid | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | amino acid | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | amino acid | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | amino acid | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | amino acid | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | amino acid | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | amino acid | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| H | acyl | $CF_3$ | S | 6-Methylthymine |

TABLE 15-continued

| $R^2$ | $R^3$ | $R^6$ | X | Base |
|---|---|---|---|---|
| H | acyl | $CF_3$ | S | 6-Methyluracil |
| H | acyl | $CF_3$ | S | 8-Methylguanine |
| H | acyl | $CF_3$ | S | 6-Methylcytosine |
| H | acyl | $CF_3$ | S | 8-Methyladenine |
| H | acyl | $CF_3$ | S | 8-Methylhypoxanthine |
| H | acyl | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| H | acyl | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| H | acyl | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| H | acyl | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| H | acyl | $CF_3$ | S | 2-amino-8-methyladenine |
| H | acyl | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| H | acyl | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| H | acyl | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| H | acyl | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| H | acyl | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| H | acyl | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| H | acyl | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| H | acyl | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| H | acyl | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| H | amino acid | $CF_3$ | S | 6-Methylthymine |
| H | amino acid | $CF_3$ | S | 6-Methyluracil |
| H | amino acid | $CF_3$ | S | 8-Methylguanine |
| H | amino acid | $CF_3$ | S | 6-Methylcytosine |
| H | amino acid | $CF_3$ | S | 8-Methyladenine |
| H | amino acid | $CF_3$ | S | 8-Methylhypoxanthine |
| H | amino acid | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| H | amino acid | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| H | amino acid | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| H | amino acid | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| H | amino acid | $CF_3$ | S | 2-amino-8-methyladenine |
| H | amino acid | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| H | amino acid | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| H | amino acid | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| H | amino acid | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| H | amino acid | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| H | amino acid | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| H | amino acid | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| H | amino acid | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| H | amino acid | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | amino acid | $CF_3$ | S | 6-Methylthymine |
| amino acid | amino acid | $CF_3$ | S | 6-Methyluracil |
| amino acid | amino acid | $CF_3$ | S | 8-Methylguanine |
| amino acid | amino acid | $CF_3$ | S | 6-Methylcytosine |
| amino acid | amino acid | $CF_3$ | S | 8-Methyladenine |
| amino acid | amino acid | $CF_3$ | S | 8-Methylhypoxanthine |
| amino acid | amino acid | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | amino acid | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | amino acid | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | amino acid | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | amino acid | $CF_3$ | S | 2-amino-8-methyladenine |
| amino acid | amino acid | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | amino acid | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | amino acid | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | amino acid | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | amino acid | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | amino acid | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | amino acid | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | amino acid | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | amino acid | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | H | $CF_3$ | S | 6-Methylthymine |
| amino acid | H | $CF_3$ | S | 6-Methyluracil |
| amino acid | H | $CF_3$ | S | 8-Methylguanine |
| amino acid | H | $CF_3$ | S | 6-Methylcytosine |
| amino acid | H | $CF_3$ | S | 8-Methyladenine |
| amino acid | H | $CF_3$ | S | 8-Methylhypoxanthine |
| amino acid | H | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | H | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | H | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | H | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | H | $CF_3$ | S | 2-amino-8-methyladenine |
| amino acid | H | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | H | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | H | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | H | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | H | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | H | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | H | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |

TABLE 15-continued

| $R^2$ | $R^3$ | $R^6$ | X | Base |
|---|---|---|---|---|
| amino acid | H | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | H | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | acyl | $CF_3$ | S | 6-Methylthymine |
| amino acid | acyl | $CF_3$ | S | 6-Methyluracil |
| amino acid | acyl | $CF_3$ | S | 8-Methylguanine |
| amino acid | acyl | $CF_3$ | S | 6-Methylcytosine |
| amino acid | acyl | $CF_3$ | S | 8-Methyladenine |
| amino acid | acyl | $CF_3$ | S | 8-Methylhypoxanthine |
| amino acid | acyl | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | acyl | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | acyl | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | acyl | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | acyl | $CF_3$ | S | 2-amino-8-methyladenine |
| amino acid | acyl | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | acyl | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | acyl | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | acyl | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | acyl | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | acyl | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | acyl | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | acyl | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | acyl | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |

TABLE 16

| $R^2$ | $R^6$ | X | Base |
|---|---|---|---|
| acyl | $CH_3$ | O | 6-Methylthymine |
| acyl | $CH_3$ | O | 6-Methyluracil |
| acyl | $CH_3$ | O | 8-Methylguanine |
| acyl | $CH_3$ | O | 6-Methylcytosine |
| acyl | $CH_3$ | O | 8-Methyladenine |
| acyl | $CH_3$ | O | 8-Methylhypoxanthine |
| acyl | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| acyl | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| acyl | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| acyl | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CH_3$ | O | 2-amino-8-methyladenine |
| acyl | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| acyl | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| acyl | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| acyl | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| acyl | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| acyl | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CH_3$ | O | 6-Methylthymine |
| amino acid | $CH_3$ | O | 6-Methyluracil |
| amino acid | $CH_3$ | O | 8-Methylguanine |
| amino acid | $CH_3$ | O | 6-Methylcytosine |
| amino acid | $CH_3$ | O | 8-Methyladenine |
| amino acid | $CH_3$ | O | 8-Methylhypoxanthine |
| amino acid | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| amino acid | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| amino acid | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| amino acid | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CH_3$ | O | 2-amino-8-methyladenine |
| amino acid | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| amino acid | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| amino acid | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| amino acid | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| amino acid | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| amino acid | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | $CF_3$ | O | 6-Methylthymine |
| acyl | $CF_3$ | O | 6-Methyluracil |
| acyl | $CF_3$ | O | 8-Methylguanine |
| acyl | $CF_3$ | O | 6-Methylcytosine |
| acyl | $CF_3$ | O | 8-Methyladenine |
| acyl | $CF_3$ | O | 8-Methylhypoxanthine |

TABLE 16-continued

| $R^2$ | $R^6$ | X | Base |
|---|---|---|---|
| acyl | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| acyl | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| acyl | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| acyl | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CF_3$ | O | 2-amino-8-methyladenine |
| acyl | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| acyl | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| acyl | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| acyl | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| acyl | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| acyl | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CF_3$ | O | 6-Methylthymine |
| amino acid | $CF_3$ | O | 6-Methyluracil |
| amino acid | $CF_3$ | O | 8-Methylguanine |
| amino acid | $CF_3$ | O | 6-Methylcytosine |
| amino acid | $CF_3$ | O | 8-Methyladenine |
| amino acid | $CF_3$ | O | 8-Methylhypoxanthine |
| amino acid | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| amino acid | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| amino acid | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| amino acid | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CF_3$ | O | 2-amino-8-methyladenine |
| amino acid | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| amino acid | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| amino acid | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| amino acid | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| amino acid | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| amino acid | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | $CH_3$ | S | 6-Methylthymine |
| acyl | $CH_3$ | S | 6-Methyluracil |
| acyl | $CH_3$ | S | 8-Methylguanine |
| acyl | $CH_3$ | S | 6-Methylcytosine |
| acyl | $CH_3$ | S | 8-Methyladenine |
| acyl | $CH_3$ | S | 8-Methylhypoxanthine |
| acyl | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CH_3$ | S | 2-amino-8-methyladenine |
| acyl | $CH_3$ | S | 2-amino-8-methylhypoxanthine |

TABLE 16-continued

| $R^2$ | $R^6$ | X | Base |
|---|---|---|---|
| acyl | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CH_3$ | S | 6-Methylthymine |
| amino acid | $CH_3$ | S | 6-Methyluracil |
| amino acid | $CH_3$ | S | 8-Methylguanine |
| amino acid | $CH_3$ | S | 6-Methylcytosine |
| amino acid | $CH_3$ | S | 8-Methyladenine |
| amino acid | $CH_3$ | S | 8-Methylhypoxanthine |
| amino acid | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CH_3$ | S | 2-amino-8-methyladenine |
| amino acid | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | $CF_3$ | S | 6-Methylthymine |
| acyl | $CF_3$ | S | 6-Methyluracil |
| acyl | $CF_3$ | S | 8-Methylguanine |
| acyl | $CF_3$ | S | 6-Methylcytosine |
| acyl | $CF_3$ | S | 8-Methyladenine |
| acyl | $CF_3$ | S | 8-Methylhypoxanthine |
| acyl | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CF_3$ | S | 2-amino-8-methyladenine |
| acyl | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CF_3$ | S | 6-Methylthymine |
| amino acid | $CF_3$ | S | 6-Methyluracil |
| amino acid | $CF_3$ | S | 8-Methylguanine |
| amino acid | $CF_3$ | S | 6-Methylcytosine |
| amino acid | $CF_3$ | S | 8-Methyladenine |
| amino acid | $CF_3$ | S | 8-Methylhypoxanthine |
| amino acid | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CF_3$ | S | 2-amino-8-methyladenine |
| amino acid | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |

TABLE 17

| $R^2$ | $R^6$ | X | Base |
|---|---|---|---|
| acyl | $CH_3$ | O | 6-Methylthymine |
| acyl | $CH_3$ | O | 6-Methyluracil |
| acyl | $CH_3$ | O | 8-Methylguanine |
| acyl | $CH_3$ | O | 6-Methylcytosine |
| acyl | $CH_3$ | O | 8-Methyladenine |
| acyl | $CH_3$ | O | 8-Methylhypoxanthine |
| acyl | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| acyl | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| acyl | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| acyl | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CH_3$ | O | 2-amino-8-methyladenine |
| acyl | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| acyl | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| acyl | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| acyl | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| acyl | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| acyl | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CH_3$ | O | 6-Methylthymine |
| amino acid | $CH_3$ | O | 6-Methyluracil |
| amino acid | $CH_3$ | O | 8-Methylguanine |
| amino acid | $CH_3$ | O | 6-Methylcytosine |
| amino acid | $CH_3$ | O | 8-Methyladenine |
| amino acid | $CH_3$ | O | 8-Methylhypoxanthine |
| amino acid | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| amino acid | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| amino acid | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| amino acid | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CH_3$ | O | 2-amino-8-methyladenine |
| amino acid | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| amino acid | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| amino acid | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| amino acid | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| amino acid | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| amino acid | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | $CF_3$ | O | 6-Methylthymine |
| acyl | $CF_3$ | O | 6-Methyluracil |
| acyl | $CF_3$ | O | 8-Methylguanine |
| acyl | $CF_3$ | O | 6-Methylcytosine |
| acyl | $CF_3$ | O | 8-Methyladenine |
| acyl | $CF_3$ | O | 8-Methylhypoxanthine |
| acyl | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| acyl | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| acyl | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| acyl | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CF_3$ | O | 2-amino-8-methyladenine |
| acyl | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| acyl | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| acyl | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| acyl | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| acyl | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| acyl | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CF_3$ | O | 6-Methylthymine |
| amino acid | $CF_3$ | O | 6-Methyluracil |
| amino acid | $CF_3$ | O | 8-Methylguanine |
| amino acid | $CF_3$ | O | 6-Methylcytosine |
| amino acid | $CF_3$ | O | 8-Methyladenine |
| amino acid | $CF_3$ | O | 8-Methylhypoxanthine |
| amino acid | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| amino acid | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| amino acid | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| amino acid | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CF_3$ | O | 2-amino-8-methyladenine |
| amino acid | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| amino acid | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| amino acid | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| amino acid | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| amino acid | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |

TABLE 17-continued

| $R^2$ | $R^6$ | X | Base |
|---|---|---|---|
| amino acid | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| amino acid | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | $CH_3$ | S | 6-Methylthymine |
| acyl | $CH_3$ | S | 6-Methyluracil |
| acyl | $CH_3$ | S | 8-Methylguanine |
| acyl | $CH_3$ | S | 6-Methylcytosine |
| acyl | $CH_3$ | S | 8-Methyladenine |
| acyl | $CH_3$ | S | 8-Methylhypoxanthine |
| acyl | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CH_3$ | S | 2-amino-8-methyladenine |
| acyl | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CH_3$ | S | 6-Methylthymine |
| amino acid | $CH_3$ | S | 6-Methyluracil |
| amino acid | $CH_3$ | S | 8-Methylguanine |
| amino acid | $CH_3$ | S | 6-Methylcytosine |
| amino acid | $CH_3$ | S | 8-Methyladenine |
| amino acid | $CH_3$ | S | 8-Methylhypoxanthine |
| amino acid | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CH_3$ | S | 2-amino-8-methyladenine |
| amino acid | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |

TABLE 17-continued

| $R^2$ | $R^6$ | X | Base |
|---|---|---|---|
| amino acid | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | $CF_3$ | S | 6-Methylthymine |
| acyl | $CF_3$ | S | 6-Methyluracil |
| acyl | $CF_3$ | S | 8-Methylguanine |
| acyl | $CF_3$ | S | 6-Methylcytosine |
| acyl | $CF_3$ | S | 8-Methyladenine |
| acyl | $CF_3$ | S | 8-Methylhypoxanthine |
| acyl | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CF_3$ | S | 2-amino-8-methyladenine |
| acyl | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CF_3$ | S | 6-Methylthymine |
| amino acid | $CF_3$ | S | 6-Methyluracil |
| amino acid | $CF_3$ | S | 8-Methylguanine |
| amino acid | $CF_3$ | S | 6-Methylcytosine |
| amino acid | $CF_3$ | S | 8-Methyladenine |
| amino acid | $CF_3$ | S | 8-Methylhypoxanthine |
| amino acid | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CF_3$ | S | 2-amino-8-methyladenine |
| amino acid | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |

TABLE 18

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-acyl | O | 6-Methylthymine | F | H |
| $CH_3$ | O-acyl | O | 6-Methyluracil | F | H |
| $CH_3$ | O-acyl | O | 8-Methylguanine | F | H |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | F | H |
| $CH_3$ | O-acyl | O | 8-Methyladenine | F | H |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | F | H |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | F | H |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | F | H |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | F | H |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-acyl | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | O-acyl | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | O-acyl | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | O | 6-Methylthymine | F | OH |
| $CH_3$ | O-acyl | O | 6-Methyluracil | F | OH |
| $CH_3$ | O-acyl | O | 8-Methylguanine | F | OH |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | F | OH |
| $CH_3$ | O-acyl | O | 8-Methyladenine | F | OH |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | O | 6-Methylthymine | Br | H |
| $CH_3$ | O-acyl | O | 6-Methyluracil | Br | H |
| $CH_3$ | O-acyl | O | 8-Methylguanine | Br | H |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | Br | H |
| $CH_3$ | O-acyl | O | 8-Methyladenine | Br | H |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | Br | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-acyl | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-acyl | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | O | 6-Methylthymine | Br | OH |
| $CH_3$ | O-acyl | O | 6-Methyluracil | Br | OH |
| $CH_3$ | O-acyl | O | 8-Methylguanine | Br | OH |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | Br | OH |
| $CH_3$ | O-acyl | O | 8-Methyladenine | Br | OH |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | O | 6-Methylthymine | Cl | OH |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-acyl | O | 6-Methyluracil | Cl | OH |
| $CH_3$ | O-acyl | O | 8-Methylguanine | Cl | OH |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | O | 8-Methyladenine | Cl | OH |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | O | 6-Methylthymine | Cl | H |
| $CH_3$ | O-acyl | O | 6-Methyluracil | Cl | H |
| $CH_3$ | O-acyl | O | 8-Methylguanine | Cl | H |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | Cl | H |
| $CH_3$ | O-acyl | O | 8-Methyladenine | Cl | H |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | O | 6-Methylthymine | H | H |
| $CH_3$ | O-acyl | O | 6-Methyluracil | H | H |
| $CH_3$ | O-acyl | O | 8-Methylguanine | H | H |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | H | H |
| $CH_3$ | O-acyl | O | 8-Methyladenine | H | H |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | H | H |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | H | H |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | H | H |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | H | H |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-acyl | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 8-Methyladenine | H | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | O-acyl | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | O-acyl | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | O | 6-Methylthymine | H | OH |
| $CH_3$ | O-acyl | O | 6-Methyluracil | H | OH |
| $CH_3$ | O-acyl | O | 8-Methylguanine | H | OH |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | H | OH |
| $CH_3$ | O-acyl | O | 8-Methyladenine | H | OH |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | O | 6-Methylthymine | OH | H |
| $CH_3$ | O-acyl | O | 6-Methyluracil | OH | H |
| $CH_3$ | O-acyl | O | 8-Methylguanine | OH | H |
| $CH_3$ | O-acyl | O | 6-Methylcytosine | OH | H |
| $CH_3$ | O-acyl | O | 8-Methyladenine | OH | H |
| $CH_3$ | O-acyl | O | 8-Methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CH_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | O | 2-Amino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CH_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CH_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | | 6-Methylthymine | F | H |
| $CH_3$ | O-amino acid | | 6-Methyluracil | F | H |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | | 8-Methylguanine | F | H |
| $CH_3$ | O-amino acid | | 6-Methylcytosine | F | H |
| $CH_3$ | O-amino acid | | 8-Methyladenine | F | H |
| $CH_3$ | O-amino acid | | 8-Methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | | 5-Fluoro-6-Methyluracil | F | H |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | F | H |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | F | OH |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | F | OH |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | F | OH |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | F | OH |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | F | OH |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | F | OH |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | Br | H |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | Br | H |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | Br | H |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | Br | H |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | Br | H |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | Br | OH |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | Br | OH |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | Br | OH |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | Br | OH |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | Cl | H |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | Cl | H |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | Cl | H |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | Cl | H |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | Cl | OH |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | Cl | OH |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | Cl | OH |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Cl | OH |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | H | H |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | H | H |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | H | H |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | H | H |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | H | H |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | H | H |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | H | H |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | H | OH |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | H | OH |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | H | OH |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | H | OH |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | H | OH |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | H | OH |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | O | 6-Methylthymine | OH | H |
| $CH_3$ | O-amino acid | O | 6-Methyluracil | OH | H |
| $CH_3$ | O-amino acid | O | 8-Methylguanine | OH | H |
| $CH_3$ | O-amino acid | O | 6-Methylcytosine | OH | H |
| $CH_3$ | O-amino acid | O | 8-Methyladenine | OH | H |
| $CH_3$ | O-amino acid | O | 8-Methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CH_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CH_3$ | OH | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | OH | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | OH | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | OH | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | OH | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | OH | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | OH | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | OH | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | OH | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | OH | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | OH | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | OH | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | OH | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | OH | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | OH | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | OH | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | OH | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | OH | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | OH | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | OH | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | OH | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | OH | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | OH | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | OH | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | OH | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | OH | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | OH | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | OH | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | OH | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | OH | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | OH | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | OH | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | OH | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | OH | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | OH | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | OH | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | OH | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | OH | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | OH | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | OH | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | OH | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | OH | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | OH | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | OH | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | OH | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | OH | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | OH | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | OH | O | 6-Methylcytosine | H | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | OH | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | OH | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | OH | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | OH | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | OH | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | OH | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | OH | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | OH | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | OH | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | OH | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | OH | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | OH | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | OH | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | OH | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | OH | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | H | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | H | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | H | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | H | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | H | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | H | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | H | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | H | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | H | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | H | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | H | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | H | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | H | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | H | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | H | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | H | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | H | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | H | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | O | 6-Methylthymine | Br | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | H | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | H | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | H | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | H | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | H | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | H | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | H | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | H | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | H | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | H | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | H | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | H | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | H | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | H | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | H | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | H | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | H | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | H | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | H | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | H | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | H | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | H | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | H | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | H | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | H | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | H | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | H | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | H | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | H | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | H | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | H | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | H | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | H | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | H | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | H | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | H | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | H | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | H | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | H | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | H | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | H | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | H | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | H | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | H | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | H | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | H | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | H | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | O | 6-Methylthymine | F | H |
| $CF_3$ | O-acyl | O | 6-Methyluracil | F | H |
| $CF_3$ | O-acyl | O | 8-Methylguanine | F | H |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | O | 8-Methyladenine | F | H |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-acyl | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-acyl | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-acyl | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-acyl | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-acyl | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Cl | OH |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-acyl | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | O | 6-Methylthymine | H | H |
| $CF_3$ | O-acyl | O | 6-Methyluracil | H | H |
| $CF_3$ | O-acyl | O | 8-Methylguanine | H | H |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | O | 8-Methyladenine | H | H |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-acyl | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-acyl | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-acyl | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-acyl | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-acyl | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-acyl | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | | 6-Methylthymine | F | H |
| $CF_3$ | O-amino acid | | 6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | | 8-Methylguanine | F | H |
| $CF_3$ | O-amino acid | | 6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | | 8-Methyladenine | F | H |
| $CF_3$ | O-amino acid | | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | F | H |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Br | H |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | Cl | H |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | H | H |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | O | 6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | H | H |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | H | H |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-amino acid | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-amino acid | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-amino acid | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | OH | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | OH | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | OH | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | OH | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | OH | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | OH | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | OH | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | OH | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | OH | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | OH | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | OH | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | OH | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | OH | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |

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TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | OH | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | OH | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | OH | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | OH | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | OH | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | OH | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | OH | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | OH | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | OH | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | OH | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | OH | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | OH | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | OH | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | OH | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | OH | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | OH | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | OH | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | OH | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | H | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | H | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | H | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | H | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | H | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | H | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | H | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | H | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | H | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | H | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | H | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | H | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | H | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | H | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | H | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | H | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | H | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | H | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | H | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | H | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | H | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | H | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | H | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | H | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | H | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | H | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | H | O | 8-Methylhypoxanthine | H | O-amino acid |

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TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | H | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | H | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | H | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | H | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | H | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | H | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | H | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | H | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | S | 6-Methylthymine | F | H |
| $CH_3$ | O-acyl | S | 6-Methyluracil | F | H |
| $CH_3$ | O-acyl | S | 8-Methylguanine | F | H |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | F | H |
| $CH_3$ | O-acyl | S | 8-Methyladenine | F | H |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | F | H |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | F | H |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | F | H |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | F | H |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | F | H |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | F | H |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | S | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-acyl | S | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | S | 6-Methylthymine | F | O-acyl |
| $CH_3$ | O-acyl | S | 6-Methyluracil | F | O-acyl |
| $CH_3$ | O-acyl | S | 8-Methylguanine | F | O-acyl |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-acyl | S | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | S | 8-Methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | S | 6-Methylthymine | F | OH |
| $CH_3$ | O-acyl | S | 6-Methyluracil | F | OH |
| $CH_3$ | O-acyl | S | 8-Methylguanine | F | OH |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | F | OH |
| $CH_3$ | O-acyl | S | 8-Methyladenine | F | OH |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | F | OH |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | F | OH |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | F | OH |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | F | OH |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | S | 6-Methylthymine | Br | H |
| $CH_3$ | O-acyl | S | 6-Methyluracil | Br | H |
| $CH_3$ | O-acyl | S | 8-Methylguanine | Br | H |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | Br | H |
| $CH_3$ | O-acyl | S | 8-Methyladenine | Br | H |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | Br | H |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Br | H |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Br | H |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Br | H |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | S | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-acyl | S | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-acyl | S | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | S | 6-Methylthymine | Br | OH |
| $CH_3$ | O-acyl | S | 6-Methyluracil | Br | OH |
| $CH_3$ | O-acyl | S | 8-Methylguanine | Br | OH |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | Br | OH |
| $CH_3$ | O-acyl | S | 8-Methyladenine | Br | OH |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | Br | OH |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Br | OH |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | S | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | S | 6-Methylthymine | Cl | OH |
| $CH_3$ | O-acyl | S | 6-Methyluracil | Cl | OH |
| $CH_3$ | O-acyl | S | 8-Methylguanine | Cl | OH |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | S | 8-Methyladenine | Cl | OH |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | S | 6-Methylthymine | Cl | H |
| $CH_3$ | O-acyl | S | 6-Methyluracil | Cl | H |
| $CH_3$ | O-acyl | S | 8-Methylguanine | Cl | H |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | Cl | H |
| $CH_3$ | O-acyl | S | 8-Methyladenine | Cl | H |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | Cl | H |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Cl | H |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | S | 6-Methylthymine | H | H |
| $CH_3$ | O-acyl | S | 6-Methyluracil | H | H |
| $CH_3$ | O-acyl | S | 8-Methylguanine | H | H |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | H | H |
| $CH_3$ | O-acyl | S | 8-Methyladenine | H | H |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | H | H |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | H | H |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | H | H |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | H | H |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | H | H |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | H | H |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | S | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-acyl | S | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | S | 6-Methylthymine | H | O-acyl |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-acyl | S | 6-Methyluracil | H | O-acyl |
| $CH_3$ | O-acyl | S | 8-Methylguanine | H | O-acyl |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | S | 8-Methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | S | 6-Methylthymine | H | OH |
| $CH_3$ | O-acyl | S | 6-Methyluracil | H | OH |
| $CH_3$ | O-acyl | S | 8-Methylguanine | H | OH |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | H | OH |
| $CH_3$ | O-acyl | S | 8-Methyladenine | H | OH |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | H | OH |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | H | OH |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | H | OH |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | H | OH |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | S | 6-Methylthymine | OH | H |
| $CH_3$ | O-acyl | S | 6-Methyluracil | OH | H |
| $CH_3$ | O-acyl | S | 8-Methylguanine | OH | H |
| $CH_3$ | O-acyl | S | 6-Methylcytosine | OH | H |
| $CH_3$ | O-acyl | S | 8-Methyladenine | OH | H |
| $CH_3$ | O-acyl | S | 8-Methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | OH | H |
| $CH_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | OH | H |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | S | 2-Amino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | OH | H |
| $CH_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | OH | H |
| $CH_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | | 6-Methylthymine | F | H |
| $CH_3$ | O-amino acid | | 6-Methyluracil | F | H |
| $CH_3$ | O-amino acid | | 8-Methylguanine | F | H |
| $CH_3$ | O-amino acid | | 6-Methylcytosine | F | H |
| $CH_3$ | O-amino acid | | 8-Methyladenine | F | H |
| $CH_3$ | O-amino acid | | 8-Methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | | 5-Fluoro-6-Methyluracil | F | H |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | F | H |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | F | H |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | F | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | F | H |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | F | O-acyl |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | F | OH |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | F | OH |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | F | OH |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | F | OH |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | F | OH |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | F | OH |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | F | OH |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | F | OH |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | F | OH |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | Br | H |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | Br | H |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | Br | H |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | Br | H |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | Br | H |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Br | H |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Br | H |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Br | H |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Br | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Br | H |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | Br | OH |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | Br | OH |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | Br | OH |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | Br | OH |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Br | OH |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Br | OH |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | Cl | H |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | Cl | H |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | Cl | H |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | Cl | H |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Cl | H |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Cl | H |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Cl | H |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | Cl | OH |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | Cl | OH |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | Cl | OH |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | H | H |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | H | H |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | H | H |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | H | H |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | H | H |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | H | H |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | H | H |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | H | H |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | H | H |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | H | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | H | O-acyl |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | H | OH |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | H | OH |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | H | OH |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | H | OH |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | H | OH |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | H | OH |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | H | OH |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | H | OH |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | H | OH |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | S | 6-Methylthymine | OH | H |
| $CH_3$ | O-amino acid | S | 6-Methyluracil | OH | H |
| $CH_3$ | O-amino acid | S | 8-Methylguanine | OH | H |
| $CH_3$ | O-amino acid | S | 6-Methylcytosine | OH | H |
| $CH_3$ | O-amino acid | S | 8-Methyladenine | OH | H |
| $CH_3$ | O-amino acid | S | 8-Methylhypoxanthine | OH | H |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | OH | H |
| $CH_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | OH | H |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | OH | H |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | OH | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CH_3$ | OH | S | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | OH | S | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | OH | S | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | OH | S | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | OH | S | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | OH | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | OH | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | OH | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | OH | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | OH | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | S | 6-Methylthymine | F | O-acyl |
| $CH_3$ | OH | S | 6-Methyluracil | F | O-acyl |
| $CH_3$ | OH | S | 8-Methylguanine | F | O-acyl |
| $CH_3$ | OH | S | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | OH | S | 8-Methyladenine | F | O-acyl |
| $CH_3$ | OH | S | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | OH | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | OH | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | OH | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | OH | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | S | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | OH | S | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | OH | S | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | OH | S | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | S | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | OH | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | OH | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | OH | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | S | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | OH | S | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | OH | S | 8-Methylguanine | Br | O-acyl |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | OH | S | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | OH | S | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | OH | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | OH | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | OH | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | OH | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | OH | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | S | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | OH | S | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | OH | S | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | OH | S | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | S | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | S | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | S | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | OH | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | OH | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | S | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | OH | S | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | OH | S | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | OH | S | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | S | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | OH | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | OH | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | OH | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | S | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | OH | S | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | OH | S | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | OH | S | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | OH | S | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | OH | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | OH | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | OH | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | OH | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | OH | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | OH | S | 6-Methylthymine | H | O-acyl |
| $CH_3$ | OH | S | 6-Methyluracil | H | O-acyl |
| $CH_3$ | OH | S | 8-Methylguanine | H | O-acyl |
| $CH_3$ | OH | S | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | OH | S | 8-Methyladenine | H | O-acyl |
| $CH_3$ | OH | S | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | OH | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | OH | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | OH | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | OH | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | S | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | H | S | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | H | S | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | H | S | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | H | S | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | H | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | H | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | H | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | H | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | H | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | S | 6-Methylthymine | F | O-acyl |
| $CH_3$ | H | S | 6-Methyluracil | F | O-acyl |
| $CH_3$ | H | S | 8-Methylguanine | F | O-acyl |
| $CH_3$ | H | S | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | H | S | 8-Methyladenine | F | O-acyl |
| $CH_3$ | H | S | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | H | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | H | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | H | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | H | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | S | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | H | S | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | H | S | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | H | S | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | H | S | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | H | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | H | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | H | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | H | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | H | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | S | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | H | S | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | H | S | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | H | S | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | H | S | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | H | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | H | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | H | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | H | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | H | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | S | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | H | S | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | H | S | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | H | S | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | S | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | H | S | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | S | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | H | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | H | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | S | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | H | S | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | H | S | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | H | S | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | H | S | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | H | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | H | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | H | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | H | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | H | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | S | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | H | S | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | H | S | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | H | S | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | H | S | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | H | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | H | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | H | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | H | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CH_3$ | H | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | S | 6-Methylthymine | H | O-acyl |
| $CH_3$ | H | S | 6-Methyluracil | H | O-acyl |
| $CH_3$ | H | S | 8-Methylguanine | H | O-acyl |
| $CH_3$ | H | S | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | H | S | 8-Methyladenine | H | O-acyl |
| $CH_3$ | H | S | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | H | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | H | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | H | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | H | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | S | 6-Methylthymine | F | H |
| $CF_3$ | O-acyl | S | 6-Methyluracil | F | H |
| $CF_3$ | O-acyl | S | 8-Methylguanine | F | H |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | S | 8-Methyladenine | F | H |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | S | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | S | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | S | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-acyl | S | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | S | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | S | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | F | O-acyl |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | S | 6-Methylthymine | F | OH |
| $CF_3$ | O-acyl | S | 6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | S | 8-Methylguanine | F | OH |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | S | 8-Methyladenine | F | OH |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | S | 6-Methylthymine | Br | H |
| $CF_3$ | O-acyl | S | 6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | S | 8-Methylguanine | Br | H |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | S | 8-Methyladenine | Br | H |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | S | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | S | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | S | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | S | 6-Methylthymine | Br | OH |
| $CF_3$ | O-acyl | S | 6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | S | 8-Methylguanine | Br | OH |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | S | 8-Methyladenine | Br | OH |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | S | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | S | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-acyl | S | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | S | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | S | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | S | 6-Methylthymine | Cl | H |
| $CF_3$ | O-acyl | S | 6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | S | 8-Methylguanine | Cl | H |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | S | 8-Methyladenine | Cl | H |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | S | 6-Methylthymine | H | H |
| $CF_3$ | O-acyl | S | 6-Methyluracil | H | H |
| $CF_3$ | O-acyl | S | 8-Methylguanine | H | H |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | S | 8-Methyladenine | H | H |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | S | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | S | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | S | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-acyl | S | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | S | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | S | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | H | O-acyl |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | S | 6-Methylthymine | H | OH |
| $CF_3$ | O-acyl | S | 6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | S | 8-Methylguanine | H | OH |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | S | 8-Methyladenine | H | OH |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | S | 6-Methylthymine | OH | H |
| $CF_3$ | O-acyl | S | 6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | S | 8-Methylguanine | OH | H |
| $CF_3$ | O-acyl | S | 6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | S | 8-Methyladenine | OH | H |
| $CF_3$ | O-acyl | S | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | S | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | S | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | S | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | S | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | S | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-acyl | S | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | S | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | S | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | S | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | | 6-Methylthymine | F | H |
| $CF_3$ | O-amino acid | | 6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | | 8-Methylguanine | F | H |
| $CF_3$ | O-amino acid | | 6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | | 8-Methyladenine | F | H |
| $CF_3$ | O-amino acid | | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | F | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | F | OH |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | F | OH |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | F | OH |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | Br | H |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | Br | H |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | Br | H |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | Br | O-amino acid |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | Br | OH |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | Br | OH |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | Br | OH |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | Cl | H |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | Cl | H |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | Cl | H |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | S | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | H | H |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | H | H |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | H | H |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | H | OH |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | H | OH |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | H | OH |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | S | 6-Methylthymine | OH | H |
| $CF_3$ | O-amino acid | S | 6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | S | 8-Methylguanine | OH | H |
| $CF_3$ | O-amino acid | S | 6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | S | 8-Methyladenine | OH | H |
| $CF_3$ | O-amino acid | S | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | S | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | S | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | S | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | S | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-8-methylcytosine | OH | H |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | S | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | S | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | S | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | S | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | OH | S | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | OH | S | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | S | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | OH | S | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | S | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | OH | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | OH | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | S | 6-Methylthymine | F | O-acyl |
| $CF_3$ | OH | S | 6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | S | 8-Methylguanine | F | O-acyl |
| $CF_3$ | OH | S | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | S | 8-Methyladenine | F | O-acyl |
| $CF_3$ | OH | S | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | OH | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | S | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | OH | S | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | S | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | OH | S | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | S | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | OH | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | OH | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | S | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | OH | S | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | S | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | OH | S | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | S | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | OH | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | S | 2-Amino-8-methyladenine | Br | O-acyl |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | OH | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | OH | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | S | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | OH | S | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | S | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | S | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | S | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | S | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | S | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | S | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | OH | S | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | S | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | OH | S | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | S | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | OH | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | OH | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | S | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | OH | S | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | S | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | OH | S | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | S | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | OH | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | OH | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | S | 6-Methylthymine | H | O-acyl |
| $CF_3$ | OH | S | 6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | S | 8-Methylguanine | H | O-acyl |
| $CF_3$ | OH | S | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | S | 8-Methyladenine | H | O-acyl |
| $CF_3$ | OH | S | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | OH | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | OH | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | S | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | H | S | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | S | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | H | S | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | S | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | H | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | H | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | S | 6-Methylthymine | F | O-acyl |
| $CF_3$ | H | S | 6-Methyluracil | F | O-acyl |
| $CF_3$ | H | S | 8-Methylguanine | F | O-acyl |
| $CF_3$ | H | S | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | S | 8-Methyladenine | F | O-acyl |
| $CF_3$ | H | S | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | H | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | H | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | S | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | H | S | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | S | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | H | S | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | S | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | H | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | H | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | S | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | H | S | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | S | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | H | S | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | S | 8-Methyladenine | Br | O-acyl |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | H | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | H | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | S | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | H | S | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | S | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | H | S | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | S | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | H | S | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | S | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | H | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | S | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | H | S | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | S | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | H | S | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | S | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | H | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | H | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | S | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | H | S | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | S | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | H | S | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | S | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | H | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | H | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | S | 6-Methylthymine | H | O-acyl |
| $CF_3$ | H | S | 6-Methyluracil | H | O-acyl |

TABLE 18-continued

| $R^6$ | $R^7$ | X | Base | $R^8$ | $R^9$ |
|---|---|---|---|---|---|
| $CF_3$ | H | S | 8-Methylguanine | H | O-acyl |
| $CF_3$ | H | S | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | S | 8-Methyladenine | H | O-acyl |
| $CF_3$ | H | S | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | H | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | H | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |

TABLE 19

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | $CH_3$ | Br | H |
| acyl | H | $CH_3$ | Br | $NH_2$ |
| acyl | H | $CH_3$ | Br | NH-cyclopropyl |
| acyl | H | $CH_3$ | Br | NH-methyl |
| acyl | H | $CH_3$ | Br | NH-ethyl |
| acyl | H | $CH_3$ | Br | NH-acetyl |
| acyl | H | $CH_3$ | Br | OH |
| acyl | H | $CH_3$ | Br | OMe |
| acyl | H | $CH_3$ | Br | OEt |
| acyl | H | $CH_3$ | Br | O-cyclopropyl |
| acyl | H | $CH_3$ | Br | O-acetyl |
| acyl | H | $CH_3$ | Br | SH |
| acyl | H | $CH_3$ | Br | SMe |
| acyl | H | $CH_3$ | Br | SEt |
| acyl | H | $CH_3$ | Br | S-cyclopropyl |
| acyl | H | $CH_3$ | Br | F |
| acyl | H | $CH_3$ | Br | Cl |
| acyl | H | $CH_3$ | Br | Br |
| acyl | H | $CH_3$ | Br | I |
| acyl | acyl | $CH_3$ | Br | H |
| acyl | acyl | $CH_3$ | Br | $NH_2$ |
| acyl | acyl | $CH_3$ | Br | NH-cyclopropyl |
| acyl | acyl | $CH_3$ | Br | NH-methyl |
| acyl | acyl | $CH_3$ | Br | NH-ethyl |
| acyl | acyl | $CH_3$ | Br | NH-acetyl |
| acyl | acyl | $CH_3$ | Br | OH |
| acyl | acyl | $CH_3$ | Br | OMe |
| acyl | acyl | $CH_3$ | Br | OEt |
| acyl | acyl | $CH_3$ | Br | O-cyclopropyl |
| acyl | acyl | $CH_3$ | Br | O-acetyl |
| acyl | acyl | $CH_3$ | Br | SH |
| acyl | acyl | $CH_3$ | Br | SMe |
| acyl | acyl | $CH_3$ | Br | SEt |
| acyl | acyl | $CH_3$ | Br | S-cyclopropyl |
| acyl | acyl | $CH_3$ | Br | F |
| acyl | acyl | $CH_3$ | Br | Cl |
| acyl | acyl | $CH_3$ | Br | Br |
| acyl | acyl | $CH_3$ | Br | I |
| acyl | amino acid | $CH_3$ | Br | H |
| acyl | amino acid | $CH_3$ | Br | $NH_2$ |
| acyl | amino acid | $CH_3$ | Br | NH-cyclopropyl |
| acyl | amino acid | $CH_3$ | Br | NH-methyl |
| acyl | amino acid | $CH_3$ | Br | NH-ethyl |
| acyl | amino acid | $CH_3$ | Br | NH-acetyl |
| acyl | amino acid | $CH_3$ | Br | OH |
| acyl | amino acid | $CH_3$ | Br | OMe |
| acyl | amino acid | $CH_3$ | Br | OEt |
| acyl | amino acid | $CH_3$ | Br | O-cyclopropyl |
| acyl | amino acid | $CH_3$ | Br | O-acetyl |
| acyl | amino acid | $CH_3$ | Br | SH |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | $CH_3$ | Br | SMe |
| acyl | amino acid | $CH_3$ | Br | SEt |
| acyl | amino acid | $CH_3$ | Br | S-cyclopropyl |
| acyl | amino acid | $CH_3$ | Br | F |
| acyl | amino acid | $CH_3$ | Br | Cl |
| acyl | amino acid | $CH_3$ | Br | Br |
| acyl | amino acid | $CH_3$ | Br | I |
| H | acyl | $CH_3$ | Br | H |
| H | acyl | $CH_3$ | Br | $NH_2$ |
| H | acyl | $CH_3$ | Br | NH-cyclopropyl |
| H | acyl | $CH_3$ | Br | NH-methyl |
| H | acyl | $CH_3$ | Br | NH-ethyl |
| H | acyl | $CH_3$ | Br | NH-acetyl |
| H | acyl | $CH_3$ | Br | OH |
| H | acyl | $CH_3$ | Br | OMe |
| H | acyl | $CH_3$ | Br | OEt |
| H | acyl | $CH_3$ | Br | O-cyclopropyl |
| H | acyl | $CH_3$ | Br | O-acetyl |
| H | acyl | $CH_3$ | Br | SH |
| H | acyl | $CH_3$ | Br | SMe |
| H | acyl | $CH_3$ | Br | SEt |
| H | acyl | $CH_3$ | Br | S-cyclopropyl |
| H | acyl | $CH_3$ | Br | F |
| H | acyl | $CH_3$ | Br | Cl |
| H | acyl | $CH_3$ | Br | Br |
| H | acyl | $CH_3$ | Br | I |
| H | amino acid | $CH_3$ | Br | H |
| H | amino acid | $CH_3$ | Br | $NH_2$ |
| H | amino acid | $CH_3$ | Br | NH-cyclopropyl |
| H | amino acid | $CH_3$ | Br | NH-methyl |
| H | amino acid | $CH_3$ | Br | NH-ethyl |
| H | amino acid | $CH_3$ | Br | NH-acetyl |
| H | amino acid | $CH_3$ | Br | OH |
| H | amino acid | $CH_3$ | Br | OMe |
| H | amino acid | $CH_3$ | Br | OEt |
| H | amino acid | $CH_3$ | Br | O-cyclopropyl |
| H | amino acid | $CH_3$ | Br | O-acetyl |
| H | amino acid | $CH_3$ | Br | SH |
| H | amino acid | $CH_3$ | Br | SMe |
| H | amino acid | $CH_3$ | Br | SEt |
| H | amino acid | $CH_3$ | Br | S-cyclopropyl |
| H | amino acid | $CH_3$ | Br | F |
| H | amino acid | $CH_3$ | Br | Cl |
| H | amino acid | $CH_3$ | Br | Br |
| H | amino acid | $CH_3$ | Br | I |
| amino acid | amino acid | $CH_3$ | Br | H |
| amino acid | amino acid | $CH_3$ | Br | $NH_2$ |
| amino acid | amino acid | $CH_3$ | Br | NH-cyclopropyl |
| amino acid | amino acid | $CH_3$ | Br | NH-methyl |
| amino acid | amino acid | $CH_3$ | Br | NH-ethyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | $CH_3$ | Br | NH-acetyl |
| amino acid | amino acid | $CH_3$ | Br | OH |
| amino acid | amino acid | $CH_3$ | Br | OMe |
| amino acid | amino acid | $CH_3$ | Br | OEt |
| amino acid | amino acid | $CH_3$ | Br | O-cyclopropyl |
| amino acid | amino acid | $CH_3$ | Br | O-acetyl |
| amino acid | amino acid | $CH_3$ | Br | SH |
| amino acid | amino acid | $CH_3$ | Br | SMe |
| amino acid | amino acid | $CH_3$ | Br | SEt |
| amino acid | amino acid | $CH_3$ | Br | S-cyclopropyl |
| amino acid | amino acid | $CH_3$ | Br | F |
| amino acid | amino acid | $CH_3$ | Br | Cl |
| amino acid | amino acid | $CH_3$ | Br | Br |
| amino acid | amino acid | $CH_3$ | Br | I |
| amino acid | H | $CH_3$ | Br | H |
| amino acid | H | $CH_3$ | Br | $NH_2$ |
| amino acid | H | $CH_3$ | Br | NH-cyclopropyl |
| amino acid | H | $CH_3$ | Br | NH-methyl |
| amino acid | H | $CH_3$ | Br | NH-ethyl |
| amino acid | H | $CH_3$ | Br | NH-acetyl |
| amino acid | H | $CH_3$ | Br | OH |
| amino acid | H | $CH_3$ | Br | OMe |
| amino acid | H | $CH_3$ | Br | OEt |
| amino acid | H | $CH_3$ | Br | O-cyclopropyl |
| amino acid | H | $CH_3$ | Br | O-acetyl |
| amino acid | H | $CH_3$ | Br | SH |
| amino acid | H | $CH_3$ | Br | SMe |
| amino acid | H | $CH_3$ | Br | SEt |
| amino acid | H | $CH_3$ | Br | S-cyclopropyl |
| amino acid | H | $CH_3$ | Br | F |
| amino acid | H | $CH_3$ | Br | Cl |
| amino acid | H | $CH_3$ | Br | Br |
| amino acid | H | $CH_3$ | Br | I |
| amino acid | acyl | $CH_3$ | Br | H |
| amino acid | acyl | $CH_3$ | Br | $NH_2$ |
| amino acid | acyl | $CH_3$ | Br | NH-cyclopropyl |
| amino acid | acyl | $CH_3$ | Br | NH-methyl |
| amino acid | acyl | $CH_3$ | Br | NH-ethyl |
| amino acid | acyl | $CH_3$ | Br | NH-acetyl |
| amino acid | acyl | $CH_3$ | Br | OH |
| amino acid | acyl | $CH_3$ | Br | OMe |
| amino acid | acyl | $CH_3$ | Br | OEt |
| amino acid | acyl | $CH_3$ | Br | O-cyclopropyl |
| amino acid | acyl | $CH_3$ | Br | O-acetyl |
| amino acid | acyl | $CH_3$ | Br | SH |
| amino acid | acyl | $CH_3$ | Br | SMe |
| amino acid | acyl | $CH_3$ | Br | SEt |
| amino acid | acyl | $CH_3$ | Br | S-cyclopropyl |
| amino acid | acyl | $CH_3$ | Br | F |
| amino acid | acyl | $CH_3$ | Br | Cl |
| amino acid | acyl | $CH_3$ | Br | Br |
| amino acid | acyl | $CH_3$ | Br | I |
| acyl | H | $CF_3$ | Br | H |
| acyl | H | $CF_3$ | Br | $NH_2$ |
| acyl | H | $CF_3$ | Br | NH-cyclopropyl |
| acyl | H | $CF_3$ | Br | NH-methyl |
| acyl | H | $CF_3$ | Br | NH-ethyl |
| acyl | H | $CF_3$ | Br | NH-acetyl |
| acyl | H | $CF_3$ | Br | OH |
| acyl | H | $CF_3$ | Br | OMe |
| acyl | H | $CF_3$ | Br | OEt |
| acyl | H | $CF_3$ | Br | O-cyclopropyl |
| acyl | H | $CF_3$ | Br | O-acetyl |
| acyl | H | $CF_3$ | Br | SH |
| acyl | H | $CF_3$ | Br | SMe |
| acyl | H | $CF_3$ | Br | SEt |
| acyl | H | $CF_3$ | Br | S-cyclopropyl |
| acyl | H | $CF_3$ | Br | F |
| acyl | H | $CF_3$ | Br | Cl |
| acyl | H | $CF_3$ | Br | Br |
| acyl | H | $CF_3$ | Br | I |
| acyl | acyl | $CF_3$ | Br | H |
| acyl | acyl | $CF_3$ | Br | $NH_2$ |
| acyl | acyl | $CF_3$ | Br | NH-cyclopropyl |
| acyl | acyl | $CF_3$ | Br | NH-methyl |
| acyl | acyl | $CF_3$ | Br | NH-ethyl |
| acyl | acyl | $CF_3$ | Br | NH-acetyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | $CF_3$ | Br | OH |
| acyl | acyl | $CF_3$ | Br | OMe |
| acyl | acyl | $CF_3$ | Br | OEt |
| acyl | acyl | $CF_3$ | Br | O-cyclopropyl |
| acyl | acyl | $CF_3$ | Br | O-acetyl |
| acyl | acyl | $CF_3$ | Br | SH |
| acyl | acyl | $CF_3$ | Br | SMe |
| acyl | acyl | $CF_3$ | Br | SEt |
| acyl | acyl | $CF_3$ | Br | S-cyclopropyl |
| acyl | acyl | $CF_3$ | Br | F |
| acyl | acyl | $CF_3$ | Br | Cl |
| acyl | acyl | $CF_3$ | Br | Br |
| acyl | acyl | $CF_3$ | Br | I |
| acyl | amino acid | $CF_3$ | Br | H |
| acyl | amino acid | $CF_3$ | Br | $NH_2$ |
| acyl | amino acid | $CF_3$ | Br | NH-cyclopropyl |
| acyl | amino acid | $CF_3$ | Br | NH-methyl |
| acyl | amino acid | $CF_3$ | Br | NH-ethyl |
| acyl | amino acid | $CF_3$ | Br | NH-acetyl |
| acyl | amino acid | $CF_3$ | Br | OH |
| acyl | amino acid | $CF_3$ | Br | OMe |
| acyl | amino acid | $CF_3$ | Br | OEt |
| acyl | amino acid | $CF_3$ | Br | O-cyclopropyl |
| acyl | amino acid | $CF_3$ | Br | O-acetyl |
| acyl | amino acid | $CF_3$ | Br | SH |
| acyl | amino acid | $CF_3$ | Br | SMe |
| acyl | amino acid | $CF_3$ | Br | SEt |
| acyl | amino acid | $CF_3$ | Br | S-cyclopropyl |
| acyl | amino acid | $CF_3$ | Br | F |
| acyl | amino acid | $CF_3$ | Br | Cl |
| acyl | amino acid | $CF_3$ | Br | Br |
| acyl | amino acid | $CF_3$ | Br | I |
| H | acyl | $CF_3$ | Br | H |
| H | acyl | $CF_3$ | Br | $NH_2$ |
| H | acyl | $CF_3$ | Br | NH-cyclopropyl |
| H | acyl | $CF_3$ | Br | NH-methyl |
| H | acyl | $CF_3$ | Br | NH-ethyl |
| H | acyl | $CF_3$ | Br | NH-acetyl |
| H | acyl | $CF_3$ | Br | OH |
| H | acyl | $CF_3$ | Br | OMe |
| H | acyl | $CF_3$ | Br | OEt |
| H | acyl | $CF_3$ | Br | O-cyclopropyl |
| H | acyl | $CF_3$ | Br | O-acetyl |
| H | acyl | $CF_3$ | Br | SH |
| H | acyl | $CF_3$ | Br | SMe |
| H | acyl | $CF_3$ | Br | SEt |
| H | acyl | $CF_3$ | Br | S-cyclopropyl |
| H | acyl | $CF_3$ | Br | F |
| H | acyl | $CF_3$ | Br | Cl |
| H | acyl | $CF_3$ | Br | Br |
| H | acyl | $CF_3$ | Br | I |
| H | amino acid | $CF_3$ | Br | H |
| H | amino acid | $CF_3$ | Br | $NH_2$ |
| H | amino acid | $CF_3$ | Br | NH-cyclopropyl |
| H | amino acid | $CF_3$ | Br | NH-methyl |
| H | amino acid | $CF_3$ | Br | NH-ethyl |
| H | amino acid | $CF_3$ | Br | NH-acetyl |
| H | amino acid | $CF_3$ | Br | OH |
| H | amino acid | $CF_3$ | Br | OMe |
| H | amino acid | $CF_3$ | Br | OEt |
| H | amino acid | $CF_3$ | Br | O-cyclopropyl |
| H | amino acid | $CF_3$ | Br | O-acetyl |
| H | amino acid | $CF_3$ | Br | SH |
| H | amino acid | $CF_3$ | Br | SMe |
| H | amino acid | $CF_3$ | Br | SEt |
| H | amino acid | $CF_3$ | Br | S-cyclopropyl |
| H | amino acid | $CF_3$ | Br | F |
| H | amino acid | $CF_3$ | Br | Cl |
| H | amino acid | $CF_3$ | Br | Br |
| H | amino acid | $CF_3$ | Br | I |
| amino acid | amino acid | $CF_3$ | Br | H |
| amino acid | amino acid | $CF_3$ | Br | $NH_2$ |
| amino acid | amino acid | $CF_3$ | Br | NH-cyclopropyl |
| amino acid | amino acid | $CF_3$ | Br | NH-methyl |
| amino acid | amino acid | $CF_3$ | Br | NH-ethyl |
| amino acid | amino acid | $CF_3$ | Br | NH-acetyl |
| amino acid | amino acid | $CF_3$ | Br | OH |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | $CF_3$ | Br | OMe |
| amino acid | amino acid | $CF_3$ | Br | OEt |
| amino acid | amino acid | $CF_3$ | Br | O-cyclopropyl |
| amino acid | amino acid | $CF_3$ | Br | O-acetyl |
| amino acid | amino acid | $CF_3$ | Br | SH |
| amino acid | amino acid | $CF_3$ | Br | SMe |
| amino acid | amino acid | $CF_3$ | Br | SEt |
| amino acid | amino acid | $CF_3$ | Br | S-cyclopropyl |
| amino acid | amino acid | $CF_3$ | Br | F |
| amino acid | amino acid | $CF_3$ | Br | Cl |
| amino acid | amino acid | $CF_3$ | Br | Br |
| amino acid | amino acid | $CF_3$ | Br | I |
| amino acid | H | $CF_3$ | Br | H |
| amino acid | H | $CF_3$ | Br | $NH_2$ |
| amino acid | H | $CF_3$ | Br | NH-cyclopropyl |
| amino acid | H | $CF_3$ | Br | NH-methyl |
| amino acid | H | $CF_3$ | Br | NH-ethyl |
| amino acid | H | $CF_3$ | Br | NH-acetyl |
| amino acid | H | $CF_3$ | Br | OH |
| amino acid | H | $CF_3$ | Br | OMe |
| amino acid | H | $CF_3$ | Br | OEt |
| amino acid | H | $CF_3$ | Br | O-cyclopropyl |
| amino acid | H | $CF_3$ | Br | O-acetyl |
| amino acid | H | $CF_3$ | Br | SH |
| amino acid | H | $CF_3$ | Br | SMe |
| amino acid | H | $CF_3$ | Br | SEt |
| amino acid | H | $CF_3$ | Br | S-cyclopropyl |
| amino acid | H | $CF_3$ | Br | F |
| amino acid | H | $CF_3$ | Br | Cl |
| amino acid | H | $CF_3$ | Br | Br |
| amino acid | H | $CF_3$ | Br | I |
| amino acid | acyl | $CF_3$ | Br | H |
| amino acid | acyl | $CF_3$ | Br | $NH_2$ |
| amino acid | acyl | $CF_3$ | Br | NH-cyclopropyl |
| amino acid | acyl | $CF_3$ | Br | NH-methyl |
| amino acid | acyl | $CF_3$ | Br | NH-ethyl |
| amino acid | acyl | $CF_3$ | Br | NH-acetyl |
| amino acid | acyl | $CF_3$ | Br | OH |
| amino acid | acyl | $CF_3$ | Br | OMe |
| amino acid | acyl | $CF_3$ | Br | OEt |
| amino acid | acyl | $CF_3$ | Br | O-cyclopropyl |
| amino acid | acyl | $CF_3$ | Br | O-acetyl |
| amino acid | acyl | $CF_3$ | Br | SH |
| amino acid | acyl | $CF_3$ | Br | SMe |
| amino acid | acyl | $CF_3$ | Br | SEt |
| amino acid | acyl | $CF_3$ | Br | S-cyclopropyl |
| amino acid | acyl | $CF_3$ | Br | F |
| amino acid | acyl | $CF_3$ | Br | Cl |
| amino acid | acyl | $CF_3$ | Br | Br |
| amino acid | acyl | $CF_3$ | Br | I |
| acyl | H | Br | Br | H |
| acyl | H | Br | Br | $NH_2$ |
| acyl | H | Br | Br | NH-cyclopropyl |
| acyl | H | Br | Br | NH-methyl |
| acyl | H | Br | Br | NH-ethyl |
| acyl | H | Br | Br | NH-acetyl |
| acyl | H | Br | Br | OH |
| acyl | H | Br | Br | OMe |
| acyl | H | Br | Br | OEt |
| acyl | H | Br | Br | O-cyclopropyl |
| acyl | H | Br | Br | O-acetyl |
| acyl | H | Br | Br | SH |
| acyl | H | Br | Br | SMe |
| acyl | H | Br | Br | SEt |
| acyl | H | Br | Br | S-cyclopropyl |
| acyl | H | Br | Br | F |
| acyl | H | Br | Br | Cl |
| acyl | H | Br | Br | Br |
| acyl | H | Br | Br | I |
| acyl | acyl | Br | Br | H |
| acyl | acyl | Br | Br | $NH_2$ |
| acyl | acyl | Br | Br | NH-cyclopropyl |
| acyl | acyl | Br | Br | NH-methyl |
| acyl | acyl | Br | Br | NH-ethyl |
| acyl | acyl | Br | Br | NH-acetyl |
| acyl | acyl | Br | Br | OH |
| acyl | acyl | Br | Br | OMe |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | Br | Br | OEt |
| acyl | acyl | Br | Br | O-cyclopropyl |
| acyl | acyl | Br | Br | O-acetyl |
| acyl | acyl | Br | Br | SH |
| acyl | acyl | Br | Br | SMe |
| acyl | acyl | Br | Br | SEt |
| acyl | acyl | Br | Br | S-cyclopropyl |
| acyl | acyl | Br | Br | F |
| acyl | acyl | Br | Br | Cl |
| acyl | acyl | Br | Br | Br |
| acyl | acyl | Br | Br | I |
| acyl | amino acid | Br | Br | H |
| acyl | amino acid | Br | Br | $NH_2$ |
| acyl | amino acid | Br | Br | NH-cyclopropyl |
| acyl | amino acid | Br | Br | NH-methyl |
| acyl | amino acid | Br | Br | NH-ethyl |
| acyl | amino acid | Br | Br | NH-acetyl |
| acyl | amino acid | Br | Br | OH |
| acyl | amino acid | Br | Br | OMe |
| acyl | amino acid | Br | Br | OEt |
| acyl | amino acid | Br | Br | O-cyclopropyl |
| acyl | amino acid | Br | Br | O-acetyl |
| acyl | amino acid | Br | Br | SH |
| acyl | amino acid | Br | Br | SMe |
| acyl | amino acid | Br | Br | SEt |
| acyl | amino acid | Br | Br | S-cyclopropyl |
| acyl | amino acid | Br | Br | F |
| acyl | amino acid | Br | Br | Cl |
| acyl | amino acid | Br | Br | Br |
| acyl | amino acid | Br | Br | I |
| H | acyl | Br | Br | H |
| H | acyl | Br | Br | $NH_2$ |
| H | acyl | Br | Br | NH-cyclopropyl |
| H | acyl | Br | Br | NH-methyl |
| H | acyl | Br | Br | NH-ethyl |
| H | acyl | Br | Br | NH-acetyl |
| H | acyl | Br | Br | OH |
| H | acyl | Br | Br | OMe |
| H | acyl | Br | Br | OEt |
| H | acyl | Br | Br | O-cyclopropyl |
| H | acyl | Br | Br | O-acetyl |
| H | acyl | Br | Br | SH |
| H | acyl | Br | Br | SMe |
| H | acyl | Br | Br | SEt |
| H | acyl | Br | Br | S-cyclopropyl |
| H | acyl | Br | Br | F |
| H | acyl | Br | Br | Cl |
| H | acyl | Br | Br | Br |
| H | acyl | Br | Br | I |
| H | amino acid | Br | Br | H |
| H | amino acid | Br | Br | $NH_2$ |
| H | amino acid | Br | Br | NH-cyclopropyl |
| H | amino acid | Br | Br | NH-methyl |
| H | amino acid | Br | Br | NH-ethyl |
| H | amino acid | Br | Br | NH-acetyl |
| H | amino acid | Br | Br | OH |
| H | amino acid | Br | Br | OMe |
| H | amino acid | Br | Br | OEt |
| H | amino acid | Br | Br | O-cyclopropyl |
| H | amino acid | Br | Br | O-acetyl |
| H | amino acid | Br | Br | SH |
| H | amino acid | Br | Br | SMe |
| H | amino acid | Br | Br | SEt |
| H | amino acid | Br | Br | S-cyclopropyl |
| H | amino acid | Br | Br | F |
| H | amino acid | Br | Br | Cl |
| H | amino acid | Br | Br | Br |
| H | amino acid | Br | Br | I |
| amino acid | amino acid | Br | Br | H |
| amino acid | amino acid | Br | Br | $NH_2$ |
| amino acid | amino acid | Br | Br | NH-cyclopropyl |
| amino acid | amino acid | Br | Br | NH-methyl |
| amino acid | amino acid | Br | Br | NH-ethyl |
| amino acid | amino acid | Br | Br | NH-acetyl |
| amino acid | amino acid | Br | Br | OH |
| amino acid | amino acid | Br | Br | OMe |
| amino acid | amino acid | Br | Br | OEt |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | Br | Br | O-cyclopropyl |
| amino acid | amino acid | Br | Br | O-acetyl |
| amino acid | amino acid | Br | Br | SH |
| amino acid | amino acid | Br | Br | SMe |
| amino acid | amino acid | Br | Br | SEt |
| amino acid | amino acid | Br | Br | S-cyclopropyl |
| amino acid | amino acid | Br | Br | F |
| amino acid | amino acid | Br | Br | Cl |
| amino acid | amino acid | Br | Br | Br |
| amino acid | amino acid | Br | Br | I |
| amino acid | H | Br | Br | H |
| amino acid | H | Br | Br | $NH_2$ |
| amino acid | H | Br | Br | NH-cyclopropyl |
| amino acid | H | Br | Br | NH-methyl |
| amino acid | H | Br | Br | NH-ethyl |
| amino acid | H | Br | Br | NH-acetyl |
| amino acid | H | Br | Br | OH |
| amino acid | H | Br | Br | OMe |
| amino acid | H | Br | Br | OEt |
| amino acid | H | Br | Br | O-cyclopropyl |
| amino acid | H | Br | Br | O-acetyl |
| amino acid | H | Br | Br | SH |
| amino acid | H | Br | Br | SMe |
| amino acid | H | Br | Br | SEt |
| amino acid | H | Br | Br | S-cyclopropyl |
| amino acid | H | Br | Br | F |
| amino acid | H | Br | Br | Cl |
| amino acid | H | Br | Br | Br |
| amino acid | H | Br | Br | I |
| amino acid | acyl | Br | Br | H |
| amino acid | acyl | Br | Br | $NH_2$ |
| amino acid | acyl | Br | Br | NH-cyclopropyl |
| amino acid | acyl | Br | Br | NH-methyl |
| amino acid | acyl | Br | Br | NH-ethyl |
| amino acid | acyl | Br | Br | NH-acetyl |
| amino acid | acyl | Br | Br | OH |
| amino acid | acyl | Br | Br | OMe |
| amino acid | acyl | Br | Br | OEt |
| amino acid | acyl | Br | Br | O-cyclopropyl |
| amino acid | acyl | Br | Br | O-acetyl |
| amino acid | acyl | Br | Br | SH |
| amino acid | acyl | Br | Br | SMe |
| amino acid | acyl | Br | Br | SEt |
| amino acid | acyl | Br | Br | S-cyclopropyl |
| amino acid | acyl | Br | Br | F |
| amino acid | acyl | Br | Br | Cl |
| amino acid | acyl | Br | Br | Br |
| amino acid | acyl | Br | Br | I |
| acyl | H | Cl | Br | H |
| acyl | H | Cl | Br | $NH_2$ |
| acyl | H | Cl | Br | NH-cyclopropyl |
| acyl | H | Cl | Br | NH-methyl |
| acyl | H | Cl | Br | NH-ethyl |
| acyl | H | Cl | Br | NH-acetyl |
| acyl | H | Cl | Br | OH |
| acyl | H | Cl | Br | OMe |
| acyl | H | Cl | Br | OEt |
| acyl | H | Cl | Br | O-cyclopropyl |
| acyl | H | Cl | Br | O-acetyl |
| acyl | H | Cl | Br | SH |
| acyl | H | Cl | Br | SMe |
| acyl | H | Cl | Br | SEt |
| acyl | H | Cl | Br | S-cyclopropyl |
| acyl | H | Cl | Br | F |
| acyl | H | Cl | Br | Cl |
| acyl | H | Cl | Br | Br |
| acyl | H | Cl | Br | I |
| acyl | acyl | Cl | Br | H |
| acyl | acyl | Cl | Br | $NH_2$ |
| acyl | acyl | Cl | Br | NH-cyclopropyl |
| acyl | acyl | Cl | Br | NH-methyl |
| acyl | acyl | Cl | Br | NH-ethyl |
| acyl | acyl | Cl | Br | NH-acetyl |
| acyl | acyl | Cl | Br | OH |
| acyl | acyl | Cl | Br | OMe |
| acyl | acyl | Cl | Br | OEt |
| acyl | acyl | Cl | Br | O-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | Cl | Br | O-acetyl |
| acyl | acyl | Cl | Br | SH |
| acyl | acyl | Cl | Br | SMe |
| acyl | acyl | Cl | Br | SEt |
| acyl | acyl | Cl | Br | S-cyclopropyl |
| acyl | acyl | Cl | Br | F |
| acyl | acyl | Cl | Br | Cl |
| acyl | acyl | Cl | Br | Br |
| acyl | acyl | Cl | Br | I |
| acyl | amino acid | Cl | Br | H |
| acyl | amino acid | Cl | Br | $NH_2$ |
| acyl | amino acid | Cl | Br | NH-cyclopropyl |
| acyl | amino acid | Cl | Br | NH-methyl |
| acyl | amino acid | Cl | Br | NH-ethyl |
| acyl | amino acid | Cl | Br | NH-acetyl |
| acyl | amino acid | Cl | Br | OH |
| acyl | amino acid | Cl | Br | OMe |
| acyl | amino acid | Cl | Br | OEt |
| acyl | amino acid | Cl | Br | O-cyclopropyl |
| acyl | amino acid | Cl | Br | O-acetyl |
| acyl | amino acid | Cl | Br | SH |
| acyl | amino acid | Cl | Br | SMe |
| acyl | amino acid | Cl | Br | SEt |
| acyl | amino acid | Cl | Br | S-cyclopropyl |
| acyl | amino acid | Cl | Br | F |
| acyl | amino acid | Cl | Br | Cl |
| acyl | amino acid | Cl | Br | Br |
| acyl | amino acid | Cl | Br | I |
| H | acyl | Cl | Br | H |
| H | acyl | Cl | Br | $NH_2$ |
| H | acyl | Cl | Br | NH-cyclopropyl |
| H | acyl | Cl | Br | NH-methyl |
| H | acyl | Cl | Br | NH-ethyl |
| H | acyl | Cl | Br | NH-acetyl |
| H | acyl | Cl | Br | OH |
| H | acyl | Cl | Br | OMe |
| H | acyl | Cl | Br | OEt |
| H | acyl | Cl | Br | O-cyclopropyl |
| H | acyl | Cl | Br | O-acetyl |
| H | acyl | Cl | Br | SH |
| H | acyl | Cl | Br | SMe |
| H | acyl | Cl | Br | SEt |
| H | acyl | Cl | Br | S-cyclopropyl |
| H | acyl | Cl | Br | F |
| H | acyl | Cl | Br | Cl |
| H | acyl | Cl | Br | Br |
| H | acyl | Cl | Br | I |
| H | amino acid | Cl | Br | H |
| H | amino acid | Cl | Br | $NH_2$ |
| H | amino acid | Cl | Br | NH-cyclopropyl |
| H | amino acid | Cl | Br | NH-methyl |
| H | amino acid | Cl | Br | NH-ethyl |
| H | amino acid | Cl | Br | NH-acetyl |
| H | amino acid | Cl | Br | OH |
| H | amino acid | Cl | Br | OMe |
| H | amino acid | Cl | Br | OEt |
| H | amino acid | Cl | Br | O-cyclopropyl |
| H | amino acid | Cl | Br | O-acetyl |
| H | amino acid | Cl | Br | SH |
| H | amino acid | Cl | Br | SMe |
| H | amino acid | Cl | Br | SEt |
| H | amino acid | Cl | Br | S-cyclopropyl |
| H | amino acid | Cl | Br | F |
| H | amino acid | Cl | Br | Cl |
| H | amino acid | Cl | Br | Br |
| H | amino acid | Cl | Br | I |
| amino acid | amino acid | Cl | Br | H |
| amino acid | amino acid | Cl | Br | $NH_2$ |
| amino acid | amino acid | Cl | Br | NH-cyclopropyl |
| amino acid | amino acid | Cl | Br | NH-methyl |
| amino acid | amino acid | Cl | Br | NH-ethyl |
| amino acid | amino acid | Cl | Br | NH-acetyl |
| amino acid | amino acid | Cl | Br | OH |
| amino acid | amino acid | Cl | Br | OMe |
| amino acid | amino acid | Cl | Br | OEt |
| amino acid | amino acid | Cl | Br | O-cyclopropyl |
| amino acid | amino acid | Cl | Br | O-acetyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | Cl | Br | SH |
| amino acid | amino acid | Cl | Br | SMe |
| amino acid | amino acid | Cl | Br | SEt |
| amino acid | amino acid | Cl | Br | S-cyclopropyl |
| amino acid | amino acid | Cl | Br | F |
| amino acid | amino acid | Cl | Br | Cl |
| amino acid | amino acid | Cl | Br | Br |
| amino acid | amino acid | Cl | Br | I |
| amino acid | H | Cl | Br | H |
| amino acid | H | Cl | Br | $NH_2$ |
| amino acid | H | Cl | Br | NH-cyclopropyl |
| amino acid | H | Cl | Br | NH-methyl |
| amino acid | H | Cl | Br | NH-ethyl |
| amino acid | H | Cl | Br | NH-acetyl |
| amino acid | H | Cl | Br | OH |
| amino acid | H | Cl | Br | OMe |
| amino acid | H | Cl | Br | OEt |
| amino acid | H | Cl | Br | O-cyclopropyl |
| amino acid | H | Cl | Br | O-acetyl |
| amino acid | H | Cl | Br | SH |
| amino acid | H | Cl | Br | SMe |
| amino acid | H | Cl | Br | SEt |
| amino acid | H | Cl | Br | S-cyclopropyl |
| amino acid | H | Cl | Br | F |
| amino acid | H | Cl | Br | Cl |
| amino acid | H | Cl | Br | Br |
| amino acid | H | Cl | Br | I |
| amino acid | acyl | Cl | Br | H |
| amino acid | acyl | Cl | Br | $NH_2$ |
| amino acid | acyl | Cl | Br | NH-cyclopropyl |
| amino acid | acyl | Cl | Br | NH-methyl |
| amino acid | acyl | Cl | Br | NH-ethyl |
| amino acid | acyl | Cl | Br | NH-acetyl |
| amino acid | acyl | Cl | Br | OH |
| amino acid | acyl | Cl | Br | OMe |
| amino acid | acyl | Cl | Br | OEt |
| amino acid | acyl | Cl | Br | O-cyclopropyl |
| amino acid | acyl | Cl | Br | O-acetyl |
| amino acid | acyl | Cl | Br | SH |
| amino acid | acyl | Cl | Br | SMe |
| amino acid | acyl | Cl | Br | SEt |
| amino acid | acyl | Cl | Br | S-cyclopropyl |
| amino acid | acyl | Cl | Br | F |
| amino acid | acyl | Cl | Br | Cl |
| amino acid | acyl | Cl | Br | Br |
| amino acid | acyl | Cl | Br | I |
| acyl | H | F | Br | H |
| acyl | H | F | Br | $NH_2$ |
| acyl | H | F | Br | NH-cyclopropyl |
| acyl | H | F | Br | NH-methyl |
| acyl | H | F | Br | NH-ethyl |
| acyl | H | F | Br | NH-acetyl |
| acyl | H | F | Br | OH |
| acyl | H | F | Br | OMe |
| acyl | H | F | Br | OEt |
| acyl | H | F | Br | O-cyclopropyl |
| acyl | H | F | Br | O-acetyl |
| acyl | H | F | Br | SH |
| acyl | H | F | Br | SMe |
| acyl | H | F | Br | SEt |
| acyl | H | F | Br | S-cyclopropyl |
| acyl | H | F | Br | F |
| acyl | H | F | Br | Cl |
| acyl | H | F | Br | Br |
| acyl | H | F | Br | I |
| acyl | acyl | F | Br | H |
| acyl | acyl | F | Br | $NH_2$ |
| acyl | acyl | F | Br | NH-cyclopropyl |
| acyl | acyl | F | Br | NH-methyl |
| acyl | acyl | F | Br | NH-ethyl |
| acyl | acyl | F | Br | NH-acetyl |
| acyl | acyl | F | Br | OH |
| acyl | acyl | F | Br | OMe |
| acyl | acyl | F | Br | OEt |
| acyl | acyl | F | Br | O-cyclopropyl |
| acyl | acyl | F | Br | O-acetyl |
| acyl | acyl | F | Br | SH |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | F | Br | SMe |
| acyl | acyl | F | Br | SEt |
| acyl | acyl | F | Br | S-cyclopropyl |
| acyl | acyl | F | Br | F |
| acyl | acyl | F | Br | Cl |
| acyl | acyl | F | Br | Br |
| acyl | acyl | F | Br | I |
| acyl | amino acid | F | Br | H |
| acyl | amino acid | F | Br | $NH_2$ |
| acyl | amino acid | F | Br | NH-cyclopropyl |
| acyl | amino acid | F | Br | NH-methyl |
| acyl | amino acid | F | Br | NH-ethyl |
| acyl | amino acid | F | Br | NH-acetyl |
| acyl | amino acid | F | Br | OH |
| acyl | amino acid | F | Br | OMe |
| acyl | amino acid | F | Br | OEt |
| acyl | amino acid | F | Br | O-cyclopropyl |
| acyl | amino acid | F | Br | O-acetyl |
| acyl | amino acid | F | Br | SH |
| acyl | amino acid | F | Br | SMe |
| acyl | amino acid | F | Br | SEt |
| acyl | amino acid | F | Br | S-cyclopropyl |
| acyl | amino acid | F | Br | F |
| acyl | amino acid | F | Br | Cl |
| acyl | amino acid | F | Br | Br |
| acyl | amino acid | F | Br | I |
| H | acyl | F | Br | H |
| H | acyl | F | Br | $NH_2$ |
| H | acyl | F | Br | NH-cyclopropyl |
| H | acyl | F | Br | NH-methyl |
| H | acyl | F | Br | NH-ethyl |
| H | acyl | F | Br | NH-acetyl |
| H | acyl | F | Br | OH |
| H | acyl | F | Br | OMe |
| H | acyl | F | Br | OEt |
| H | acyl | F | Br | O-cyclopropyl |
| H | acyl | F | Br | O-acetyl |
| H | acyl | F | Br | SH |
| H | acyl | F | Br | SMe |
| H | acyl | F | Br | SEt |
| H | acyl | F | Br | S-cyclopropyl |
| H | acyl | F | Br | F |
| H | acyl | F | Br | Cl |
| H | acyl | F | Br | Br |
| H | acyl | F | Br | I |
| H | amino acid | F | Br | H |
| H | amino acid | F | Br | $NH_2$ |
| H | amino acid | F | Br | NH-cyclopropyl |
| H | amino acid | F | Br | NH-methyl |
| H | amino acid | F | Br | NH-ethyl |
| H | amino acid | F | Br | NH-acetyl |
| H | amino acid | F | Br | OH |
| H | amino acid | F | Br | OMe |
| H | amino acid | F | Br | OEt |
| H | amino acid | F | Br | O-cyclopropyl |
| H | amino acid | F | Br | O-acetyl |
| H | amino acid | F | Br | SH |
| H | amino acid | F | Br | SMe |
| H | amino acid | F | Br | SEt |
| H | amino acid | F | Br | S-cyclopropyl |
| H | amino acid | F | Br | F |
| H | amino acid | F | Br | Cl |
| H | amino acid | F | Br | Br |
| H | amino acid | F | Br | I |
| amino acid | amino acid | F | Br | H |
| amino acid | amino acid | F | Br | $NH_2$ |
| amino acid | amino acid | F | Br | NH-cyclopropyl |
| amino acid | amino acid | F | Br | NH-methyl |
| amino acid | amino acid | F | Br | NH-ethyl |
| amino acid | amino acid | F | Br | NH-acetyl |
| amino acid | amino acid | F | Br | OH |
| amino acid | amino acid | F | Br | OMe |
| amino acid | amino acid | F | Br | OEt |
| amino acid | amino acid | F | Br | O-cyclopropyl |
| amino acid | amino acid | F | Br | O-acetyl |
| amino acid | amino acid | F | Br | SH |
| amino acid | amino acid | F | Br | SMe |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | F | Br | SEt |
| amino acid | amino acid | F | Br | S-cyclopropyl |
| amino acid | amino acid | F | Br | F |
| amino acid | amino acid | F | Br | Cl |
| amino acid | amino acid | F | Br | Br |
| amino acid | amino acid | F | Br | I |
| amino acid | H | F | Br | H |
| amino acid | H | F | Br | $NH_2$ |
| amino acid | H | F | Br | NH-cyclopropyl |
| amino acid | H | F | Br | NH-methyl |
| amino acid | H | F | Br | NH-ethyl |
| amino acid | H | F | Br | NH-acetyl |
| amino acid | H | F | Br | OH |
| amino acid | H | F | Br | OMe |
| amino acid | H | F | Br | OEt |
| amino acid | H | F | Br | O-cyclopropyl |
| amino acid | H | F | Br | O-acetyl |
| amino acid | H | F | Br | SH |
| amino acid | H | F | Br | SMe |
| amino acid | H | F | Br | SEt |
| amino acid | H | F | Br | S-cyclopropyl |
| amino acid | H | F | Br | F |
| amino acid | H | F | Br | Cl |
| amino acid | H | F | Br | Br |
| amino acid | H | F | Br | I |
| amino acid | acyl | F | Br | H |
| amino acid | acyl | F | Br | $NH_2$ |
| amino acid | acyl | F | Br | NH-cyclopropyl |
| amino acid | acyl | F | Br | NH-methyl |
| amino acid | acyl | F | Br | NH-ethyl |
| amino acid | acyl | F | Br | NH-acetyl |
| amino acid | acyl | F | Br | OH |
| amino acid | acyl | F | Br | OMe |
| amino acid | acyl | F | Br | OEt |
| amino acid | acyl | F | Br | O-cyclopropyl |
| amino acid | acyl | F | Br | O-acetyl |
| amino acid | acyl | F | Br | SH |
| amino acid | acyl | F | Br | SMe |
| amino acid | acyl | F | Br | SEt |
| amino acid | acyl | F | Br | S-cyclopropyl |
| amino acid | acyl | F | Br | F |
| amino acid | acyl | F | Br | Cl |
| amino acid | acyl | F | Br | Br |
| amino acid | acyl | F | Br | I |
| acyl | H | $NH_2$ | Br | H |
| acyl | H | $NH_2$ | Br | $NH_2$ |
| acyl | H | $NH_2$ | Br | NH-cyclopropyl |
| acyl | H | $NH_2$ | Br | NH-methyl |
| acyl | H | $NH_2$ | Br | NH-ethyl |
| acyl | H | $NH_2$ | Br | NH-acetyl |
| acyl | H | $NH_2$ | Br | OH |
| acyl | H | $NH_2$ | Br | OMe |
| acyl | H | $NH_2$ | Br | OEt |
| acyl | H | $NH_2$ | Br | O-cyclopropyl |
| acyl | H | $NH_2$ | Br | O-acetyl |
| acyl | H | $NH_2$ | Br | SH |
| acyl | H | $NH_2$ | Br | SMe |
| acyl | H | $NH_2$ | Br | SEt |
| acyl | H | $NH_2$ | Br | S-cyclopropyl |
| acyl | H | $NH_2$ | Br | F |
| acyl | H | $NH_2$ | Br | Cl |
| acyl | H | $NH_2$ | Br | Br |
| acyl | H | $NH_2$ | Br | I |
| acyl | acyl | $NH_2$ | Br | H |
| acyl | acyl | $NH_2$ | Br | $NH_2$ |
| acyl | acyl | $NH_2$ | Br | NH-cyclopropyl |
| acyl | acyl | $NH_2$ | Br | NH-methyl |
| acyl | acyl | $NH_2$ | Br | NH-ethyl |
| acyl | acyl | $NH_2$ | Br | NH-acetyl |
| acyl | acyl | $NH_2$ | Br | OH |
| acyl | acyl | $NH_2$ | Br | OMe |
| acyl | acyl | $NH_2$ | Br | OEt |
| acyl | acyl | $NH_2$ | Br | O-cyclopropyl |
| acyl | acyl | $NH_2$ | Br | O-acetyl |
| acyl | acyl | $NH_2$ | Br | SH |
| acyl | acyl | $NH_2$ | Br | SMe |
| acyl | acyl | $NH_2$ | Br | SEt |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | $NH_2$ | Br | S-cyclopropyl |
| acyl | acyl | $NH_2$ | Br | F |
| acyl | acyl | $NH_2$ | Br | Cl |
| acyl | acyl | $NH_2$ | Br | Br |
| acyl | acyl | $NH_2$ | Br | I |
| acyl | amino acid | $NH_2$ | Br | H |
| acyl | amino acid | $NH_2$ | Br | $NH_2$ |
| acyl | amino acid | $NH_2$ | Br | NH-cyclopropyl |
| acyl | amino acid | $NH_2$ | Br | NH-methyl |
| acyl | amino acid | $NH_2$ | Br | NH-ethyl |
| acyl | amino acid | $NH_2$ | Br | NH-acetyl |
| acyl | amino acid | $NH_2$ | Br | OH |
| acyl | amino acid | $NH_2$ | Br | OMe |
| acyl | amino acid | $NH_2$ | Br | OEt |
| acyl | amino acid | $NH_2$ | Br | O-cyclopropyl |
| acyl | amino acid | $NH_2$ | Br | O-acetyl |
| acyl | amino acid | $NH_2$ | Br | SH |
| acyl | amino acid | $NH_2$ | Br | SMe |
| acyl | amino acid | $NH_2$ | Br | SEt |
| acyl | amino acid | $NH_2$ | Br | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | Br | F |
| acyl | amino acid | $NH_2$ | Br | Cl |
| acyl | amino acid | $NH_2$ | Br | Br |
| acyl | amino acid | $NH_2$ | Br | I |
| H | acyl | $NH_2$ | Br | H |
| H | acyl | $NH_2$ | Br | $NH_2$ |
| H | acyl | $NH_2$ | Br | NH-cyclopropyl |
| H | acyl | $NH_2$ | Br | NH-methyl |
| H | acyl | $NH_2$ | Br | NH-ethyl |
| H | acyl | $NH_2$ | Br | NH-acetyl |
| H | acyl | $NH_2$ | Br | OH |
| H | acyl | $NH_2$ | Br | OMe |
| H | acyl | $NH_2$ | Br | OEt |
| H | acyl | $NH_2$ | Br | O-cyclopropyl |
| H | acyl | $NH_2$ | Br | O-acetyl |
| H | acyl | $NH_2$ | Br | SH |
| H | acyl | $NH_2$ | Br | SMe |
| H | acyl | $NH_2$ | Br | SEt |
| H | acyl | $NH_2$ | Br | S-cyclopropyl |
| H | acyl | $NH_2$ | Br | F |
| H | acyl | $NH_2$ | Br | Cl |
| H | acyl | $NH_2$ | Br | Br |
| H | acyl | $NH_2$ | Br | I |
| H | amino acid | $NH_2$ | Br | H |
| H | amino acid | $NH_2$ | Br | $NH_2$ |
| H | amino acid | $NH_2$ | Br | NH-cyclopropyl |
| H | amino acid | $NH_2$ | Br | NH-methyl |
| H | amino acid | $NH_2$ | Br | NH-ethyl |
| H | amino acid | $NH_2$ | Br | NH-acetyl |
| H | amino acid | $NH_2$ | Br | OH |
| H | amino acid | $NH_2$ | Br | OMe |
| H | amino acid | $NH_2$ | Br | OEt |
| H | amino acid | $NH_2$ | Br | O-cyclopropyl |
| H | amino acid | $NH_2$ | Br | O-acetyl |
| H | amino acid | $NH_2$ | Br | SH |
| H | amino acid | $NH_2$ | Br | SMe |
| H | amino acid | $NH_2$ | Br | SEt |
| H | amino acid | $NH_2$ | Br | S-cyclopropyl |
| H | amino acid | $NH_2$ | Br | F |
| H | amino acid | $NH_2$ | Br | Cl |
| H | amino acid | $NH_2$ | Br | Br |
| H | amino acid | $NH_2$ | Br | I |
| amino acid | amino acid | $NH_2$ | Br | H |
| amino acid | amino acid | $NH_2$ | Br | $NH_2$ |
| amino acid | amino acid | $NH_2$ | Br | NH-cyclopropyl |
| amino acid | amino acid | $NH_2$ | Br | NH-methyl |
| amino acid | amino acid | $NH_2$ | Br | NH-ethyl |
| amino acid | amino acid | $NH_2$ | Br | NH-acetyl |
| amino acid | amino acid | $NH_2$ | Br | OH |
| amino acid | amino acid | $NH_2$ | Br | OMe |
| amino acid | amino acid | $NH_2$ | Br | OEt |
| amino acid | amino acid | $NH_2$ | Br | O-cyclopropyl |
| amino acid | amino acid | $NH_2$ | Br | O-acetyl |
| amino acid | amino acid | $NH_2$ | Br | SH |
| amino acid | amino acid | $NH_2$ | Br | SMe |
| amino acid | amino acid | $NH_2$ | Br | SEt |
| amino acid | amino acid | $NH_2$ | Br | S-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | $NH_2$ | Br | F |
| amino acid | amino acid | $NH_2$ | Br | Cl |
| amino acid | amino acid | $NH_2$ | Br | Br |
| amino acid | amino acid | $NH_2$ | Br | I |
| amino acid | H | $NH_2$ | Br | H |
| amino acid | H | $NH_2$ | Br | $NH_2$ |
| amino acid | H | $NH_2$ | Br | NH-cyclopropyl |
| amino acid | H | $NH_2$ | Br | NH-methyl |
| amino acid | H | $NH_2$ | Br | NH-ethyl |
| amino acid | H | $NH_2$ | Br | NH-acetyl |
| amino acid | H | $NH_2$ | Br | OH |
| amino acid | H | $NH_2$ | Br | OMe |
| amino acid | H | $NH_2$ | Br | OEt |
| amino acid | H | $NH_2$ | Br | O-cyclopropyl |
| amino acid | H | $NH_2$ | Br | O-acetyl |
| amino acid | H | $NH_2$ | Br | SH |
| amino acid | H | $NH_2$ | Br | SMe |
| amino acid | H | $NH_2$ | Br | SEt |
| amino acid | H | $NH_2$ | Br | S-cyclopropyl |
| amino acid | H | $NH_2$ | Br | F |
| amino acid | H | $NH_2$ | Br | Cl |
| amino acid | H | $NH_2$ | Br | Br |
| amino acid | H | $NH_2$ | Br | I |
| amino acid | acyl | $NH_2$ | Br | H |
| amino acid | acyl | $NH_2$ | Br | $NH_2$ |
| amino acid | acyl | $NH_2$ | Br | NH-cyclopropyl |
| amino acid | acyl | $NH_2$ | Br | NH-methyl |
| amino acid | acyl | $NH_2$ | Br | NH-ethyl |
| amino acid | acyl | $NH_2$ | Br | NH-acetyl |
| amino acid | acyl | $NH_2$ | Br | OH |
| amino acid | acyl | $NH_2$ | Br | OMe |
| amino acid | acyl | $NH_2$ | Br | OEt |
| amino acid | acyl | $NH_2$ | Br | O-cyclopropyl |
| amino acid | acyl | $NH_2$ | Br | O-acetyl |
| amino acid | acyl | $NH_2$ | Br | SH |
| amino acid | acyl | $NH_2$ | Br | SMe |
| amino acid | acyl | $NH_2$ | Br | SEt |
| amino acid | acyl | $NH_2$ | Br | S-cyclopropyl |
| amino acid | acyl | $NH_2$ | Br | F |
| amino acid | acyl | $NH_2$ | Br | Cl |
| amino acid | acyl | $NH_2$ | Br | Br |
| amino acid | acyl | $NH_2$ | Br | I |
| acyl | H | SH | Br | H |
| acyl | H | SH | Br | $NH_2$ |
| acyl | H | SH | Br | NH-cyclopropyl |
| acyl | H | SH | Br | NH-methyl |
| acyl | H | SH | Br | NH-ethyl |
| acyl | H | SH | Br | NH-acetyl |
| acyl | H | SH | Br | OH |
| acyl | H | SH | Br | OMe |
| acyl | H | SH | Br | OEt |
| acyl | H | SH | Br | O-cyclopropyl |
| acyl | H | SH | Br | O-acetyl |
| acyl | H | SH | Br | SH |
| acyl | H | SH | Br | SMe |
| acyl | H | SH | Br | SEt |
| acyl | H | SH | Br | S-cyclopropyl |
| acyl | H | SH | Br | F |
| acyl | H | SH | Br | Cl |
| acyl | H | SH | Br | Br |
| acyl | H | SH | Br | I |
| acyl | acyl | SH | Br | H |
| acyl | acyl | SH | Br | $NH_2$ |
| acyl | acyl | SH | Br | NH-cyclopropyl |
| acyl | acyl | SH | Br | NH-methyl |
| acyl | acyl | SH | Br | NH-ethyl |
| acyl | acyl | SH | Br | NH-acetyl |
| acyl | acyl | SH | Br | OH |
| acyl | acyl | SH | Br | OMe |
| acyl | acyl | SH | Br | OEt |
| acyl | acyl | SH | Br | O-cyclopropyl |
| acyl | acyl | SH | Br | O-acetyl |
| acyl | acyl | SH | Br | SH |
| acyl | acyl | SH | Br | SMe |
| acyl | acyl | SH | Br | SEt |
| acyl | acyl | SH | Br | S-cyclopropyl |
| acyl | acyl | SH | Br | F |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | SH | Br | Cl |
| acyl | acyl | SH | Br | Br |
| acyl | acyl | SH | Br | I |
| acyl | amino acid | SH | Br | H |
| acyl | amino acid | SH | Br | $NH_2$ |
| acyl | amino acid | SH | Br | NH-cyclopropyl |
| acyl | amino acid | SH | Br | NH-methyl |
| acyl | amino acid | SH | Br | NH-ethyl |
| acyl | amino acid | SH | Br | NH-acetyl |
| acyl | amino acid | SH | Br | OH |
| acyl | amino acid | SH | Br | OMe |
| acyl | amino acid | SH | Br | OEt |
| acyl | amino acid | SH | Br | O-cyclopropyl |
| acyl | amino acid | SH | Br | O-acetyl |
| acyl | amino acid | SH | Br | SH |
| acyl | amino acid | SH | Br | SMe |
| acyl | amino acid | SH | Br | SEt |
| acyl | amino acid | SH | Br | S-cyclopropyl |
| acyl | amino acid | SH | Br | F |
| acyl | amino acid | SH | Br | Cl |
| acyl | amino acid | SH | Br | Br |
| acyl | amino acid | SH | Br | I |
| H | acyl | SH | Br | H |
| H | acyl | SH | Br | $NH_2$ |
| H | acyl | SH | Br | NH-cyclopropyl |
| H | acyl | SH | Br | NH-methyl |
| H | acyl | SH | Br | NH-ethyl |
| H | acyl | SH | Br | NH-acetyl |
| H | acyl | SH | Br | OH |
| H | acyl | SH | Br | OMe |
| H | acyl | SH | Br | OEt |
| H | acyl | SH | Br | O-cyclopropyl |
| H | acyl | SH | Br | O-acetyl |
| H | acyl | SH | Br | SH |
| H | acyl | SH | Br | SMe |
| H | acyl | SH | Br | SEt |
| H | acyl | SH | Br | S-cyclopropyl |
| H | acyl | SH | Br | F |
| H | acyl | SH | Br | Cl |
| H | acyl | SH | Br | Br |
| H | acyl | SH | Br | I |
| H | amino acid | SH | Br | H |
| H | amino acid | SH | Br | $NH_2$ |
| H | amino acid | SH | Br | NH-cyclopropyl |
| H | amino acid | SH | Br | NH-methyl |
| H | amino acid | SH | Br | NH-ethyl |
| H | amino acid | SH | Br | NH-acetyl |
| H | amino acid | SH | Br | OH |
| H | amino acid | SH | Br | OMe |
| H | amino acid | SH | Br | OEt |
| H | amino acid | SH | Br | O-cyclopropyl |
| H | amino acid | SH | Br | O-acetyl |
| H | amino acid | SH | Br | SH |
| H | amino acid | SH | Br | SMe |
| H | amino acid | SH | Br | SEt |
| H | amino acid | SH | Br | S-cyclopropyl |
| H | amino acid | SH | Br | F |
| H | amino acid | SH | Br | Cl |
| H | amino acid | SH | Br | Br |
| H | amino acid | SH | Br | I |
| amino acid | amino acid | SH | Br | H |
| amino acid | amino acid | SH | Br | $NH_2$ |
| amino acid | amino acid | SH | Br | NH-cyclopropyl |
| amino acid | amino acid | SH | Br | NH-methyl |
| amino acid | amino acid | SH | Br | NH-ethyl |
| amino acid | amino acid | SH | Br | NH-acetyl |
| amino acid | amino acid | SH | Br | OH |
| amino acid | amino acid | SH | Br | OMe |
| amino acid | amino acid | SH | Br | OEt |
| amino acid | amino acid | SH | Br | O-cyclopropyl |
| amino acid | amino acid | SH | Br | O-acetyl |
| amino acid | amino acid | SH | Br | SH |
| amino acid | amino acid | SH | Br | SMe |
| amino acid | amino acid | SH | Br | SEt |
| amino acid | amino acid | SH | Br | S-cyclopropyl |
| amino acid | amino acid | SH | Br | F |
| amino acid | amino acid | SH | Br | Cl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | SH | Br | Br |
| amino acid | amino acid | SH | Br | I |
| amino acid | H | SH | Br | H |
| amino acid | H | SH | Br | $NH_2$ |
| amino acid | H | SH | Br | NH-cyclopropyl |
| amino acid | H | SH | Br | NH-methyl |
| amino acid | H | SH | Br | NH-ethyl |
| amino acid | H | SH | Br | NH-acetyl |
| amino acid | H | SH | Br | OH |
| amino acid | H | SH | Br | OMe |
| amino acid | H | SH | Br | OEt |
| amino acid | H | SH | Br | O-cyclopropyl |
| amino acid | H | SH | Br | O-acetyl |
| amino acid | H | SH | Br | SH |
| amino acid | H | SH | Br | SMe |
| amino acid | H | SH | Br | SEt |
| amino acid | H | SH | Br | S-cyclopropyl |
| amino acid | H | SH | Br | F |
| amino acid | H | SH | Br | Cl |
| amino acid | H | SH | Br | Br |
| amino acid | H | SH | Br | I |
| amino acid | acyl | SH | Br | H |
| amino acid | acyl | SH | Br | $NH_2$ |
| amino acid | acyl | SH | Br | NH-cyclopropyl |
| amino acid | acyl | SH | Br | NH-methyl |
| amino acid | acyl | SH | Br | NH-ethyl |
| amino acid | acyl | SH | Br | NH-acetyl |
| amino acid | acyl | SH | Br | OH |
| amino acid | acyl | SH | Br | OMe |
| amino acid | acyl | SH | Br | OEt |
| amino acid | acyl | SH | Br | O-cyclopropyl |
| amino acid | acyl | SH | Br | O-acetyl |
| amino acid | acyl | SH | Br | SH |
| amino acid | acyl | SH | Br | SMe |
| amino acid | acyl | SH | Br | SEt |
| amino acid | acyl | SH | Br | S-cyclopropyl |
| amino acid | acyl | SH | Br | F |
| amino acid | acyl | SH | Br | Cl |
| amino acid | acyl | SH | Br | Br |
| amino acid | acyl | SH | Br | I |
| acyl | H | OH | Br | H |
| acyl | H | OH | Br | $NH_2$ |
| acyl | H | OH | Br | NH-cyclopropyl |
| acyl | H | OH | Br | NH-methyl |
| acyl | H | OH | Br | NH-ethyl |
| acyl | H | OH | Br | NH-acetyl |
| acyl | H | OH | Br | OH |
| acyl | H | OH | Br | OMe |
| acyl | H | OH | Br | OEt |
| acyl | H | OH | Br | O-cyclopropyl |
| acyl | H | OH | Br | O-acetyl |
| acyl | H | OH | Br | SH |
| acyl | H | OH | Br | SMe |
| acyl | H | OH | Br | SEt |
| acyl | H | OH | Br | S-cyclopropyl |
| acyl | H | OH | Br | F |
| acyl | H | OH | Br | Cl |
| acyl | H | OH | Br | Br |
| acyl | H | OH | Br | I |
| acyl | acyl | OH | Br | H |
| acyl | acyl | OH | Br | $NH_2$ |
| acyl | acyl | OH | Br | NH-cyclopropyl |
| acyl | acyl | OH | Br | NH-methyl |
| acyl | acyl | OH | Br | NH-ethyl |
| acyl | acyl | OH | Br | NH-acetyl |
| acyl | acyl | OH | Br | OH |
| acyl | acyl | OH | Br | OMe |
| acyl | acyl | OH | Br | OEt |
| acyl | acyl | OH | Br | O-cyclopropyl |
| acyl | acyl | OH | Br | O-acetyl |
| acyl | acyl | OH | Br | SH |
| acyl | acyl | OH | Br | SMe |
| acyl | acyl | OH | Br | SEt |
| acyl | acyl | OH | Br | S-cyclopropyl |
| acyl | acyl | OH | Br | F |
| acyl | acyl | OH | Br | Cl |
| acyl | acyl | OH | Br | Br |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | OH | Br | I |
| acyl | amino acid | OH | Br | H |
| acyl | amino acid | OH | Br | $NH_2$ |
| acyl | amino acid | OH | Br | NH-cyclopropyl |
| acyl | amino acid | OH | Br | NH-methyl |
| acyl | amino acid | OH | Br | NH-ethyl |
| acyl | amino acid | OH | Br | NH-acetyl |
| acyl | amino acid | OH | Br | OH |
| acyl | amino acid | OH | Br | OMe |
| acyl | amino acid | OH | Br | OEt |
| acyl | amino acid | OH | Br | O-cyclopropyl |
| acyl | amino acid | OH | Br | O-acetyl |
| acyl | amino acid | OH | Br | SH |
| acyl | amino acid | OH | Br | SMe |
| acyl | amino acid | OH | Br | SEt |
| acyl | amino acid | OH | Br | S-cyclopropyl |
| acyl | amino acid | OH | Br | F |
| acyl | amino acid | OH | Br | Cl |
| acyl | amino acid | OH | Br | Br |
| acyl | amino acid | OH | Br | I |
| H | acyl | OH | Br | H |
| H | acyl | OH | Br | $NH_2$ |
| H | acyl | OH | Br | NH-cyclopropyl |
| H | acyl | OH | Br | NH-methyl |
| H | acyl | OH | Br | NH-ethyl |
| H | acyl | OH | Br | NH-acetyl |
| H | acyl | OH | Br | OH |
| H | acyl | OH | Br | OMe |
| H | acyl | OH | Br | OEt |
| H | acyl | OH | Br | O-cyclopropyl |
| H | acyl | OH | Br | O-acetyl |
| H | acyl | OH | Br | SH |
| H | acyl | OH | Br | SMe |
| H | acyl | OH | Br | SEt |
| H | acyl | OH | Br | S-cyclopropyl |
| H | acyl | OH | Br | F |
| H | acyl | OH | Br | Cl |
| H | acyl | OH | Br | Br |
| H | acyl | OH | Br | I |
| H | amino acid | OH | Br | H |
| H | amino acid | OH | Br | $NH_2$ |
| H | amino acid | OH | Br | NH-cyclopropyl |
| H | amino acid | OH | Br | NH-methyl |
| H | amino acid | OH | Br | NH-ethyl |
| H | amino acid | OH | Br | NH-acetyl |
| H | amino acid | OH | Br | OH |
| H | amino acid | OH | Br | OMe |
| H | amino acid | OH | Br | OEt |
| H | amino acid | OH | Br | O-cyclopropyl |
| H | amino acid | OH | Br | O-acetyl |
| H | amino acid | OH | Br | SH |
| H | amino acid | OH | Br | SMe |
| H | amino acid | OH | Br | SEt |
| H | amino acid | OH | Br | S-cyclopropyl |
| H | amino acid | OH | Br | F |
| H | amino acid | OH | Br | Cl |
| H | amino acid | OH | Br | Br |
| H | amino acid | OH | Br | I |
| amino acid | amino acid | OH | Br | H |
| amino acid | amino acid | OH | Br | $NH_2$ |
| amino acid | amino acid | OH | Br | NH-cyclopropyl |
| amino acid | amino acid | OH | Br | NH-methyl |
| amino acid | amino acid | OH | Br | NH-ethyl |
| amino acid | amino acid | OH | Br | NH-acetyl |
| amino acid | amino acid | OH | Br | OH |
| amino acid | amino acid | OH | Br | OMe |
| amino acid | amino acid | OH | Br | OEt |
| amino acid | amino acid | OH | Br | O-cyclopropyl |
| amino acid | amino acid | OH | Br | O-acetyl |
| amino acid | amino acid | OH | Br | SH |
| amino acid | amino acid | OH | Br | SMe |
| amino acid | amino acid | OH | Br | SEt |
| amino acid | amino acid | OH | Br | S-cyclopropyl |
| amino acid | amino acid | OH | Br | F |
| amino acid | amino acid | OH | Br | Cl |
| amino acid | amino acid | OH | Br | Br |
| amino acid | amino acid | OH | Br | I |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | OH | Br | H |
| amino acid | H | OH | Br | $NH_2$ |
| amino acid | H | OH | Br | NH-cyclopropyl |
| amino acid | H | OH | Br | NH-methyl |
| amino acid | H | OH | Br | NH-ethyl |
| amino acid | H | OH | Br | NH-acetyl |
| amino acid | H | OH | Br | OH |
| amino acid | H | OH | Br | OMe |
| amino acid | H | OH | Br | OEt |
| amino acid | H | OH | Br | O-cyclopropyl |
| amino acid | H | OH | Br | O-acetyl |
| amino acid | H | OH | Br | SH |
| amino acid | H | OH | Br | SMe |
| amino acid | H | OH | Br | SEt |
| amino acid | H | OH | Br | S-cyclopropyl |
| amino acid | H | OH | Br | F |
| amino acid | H | OH | Br | Cl |
| amino acid | H | OH | Br | Br |
| amino acid | H | OH | Br | I |
| amino acid | acyl | OH | Br | H |
| amino acid | acyl | OH | Br | $NH_2$ |
| amino acid | acyl | OH | Br | NH-cyclopropyl |
| amino acid | acyl | OH | Br | NH-methyl |
| amino acid | acyl | OH | Br | NH-ethyl |
| amino acid | acyl | OH | Br | NH-acetyl |
| amino acid | acyl | OH | Br | OH |
| amino acid | acyl | OH | Br | OMe |
| amino acid | acyl | OH | Br | OEt |
| amino acid | acyl | OH | Br | O-cyclopropyl |
| amino acid | acyl | OH | Br | O-acetyl |
| amino acid | acyl | OH | Br | SH |
| amino acid | acyl | OH | Br | SMe |
| amino acid | acyl | OH | Br | SEt |
| amino acid | acyl | OH | Br | S-cyclopropyl |
| amino acid | acyl | OH | Br | F |
| amino acid | acyl | OH | Br | Cl |
| amino acid | acyl | OH | Br | Br |
| amino acid | acyl | OH | Br | I |
| acyl | H | $CH_3$ | Cl | H |
| acyl | H | $CH_3$ | Cl | $NH_2$ |
| acyl | H | $CH_3$ | Cl | NH-cyclopropyl |
| acyl | H | $CH_3$ | Cl | NH-methyl |
| acyl | H | $CH_3$ | Cl | NH-ethyl |
| acyl | H | $CH_3$ | Cl | NH-acetyl |
| acyl | H | $CH_3$ | Cl | OH |
| acyl | H | $CH_3$ | Cl | OMe |
| acyl | H | $CH_3$ | Cl | OEt |
| acyl | H | $CH_3$ | Cl | O-cyclopropyl |
| acyl | H | $CH_3$ | Cl | O-acetyl |
| acyl | H | $CH_3$ | Cl | SH |
| acyl | H | $CH_3$ | Cl | SMe |
| acyl | H | $CH_3$ | Cl | SEt |
| acyl | H | $CH_3$ | Cl | S-cyclopropyl |
| acyl | H | $CH_3$ | Cl | F |
| acyl | H | $CH_3$ | Cl | Cl |
| acyl | H | $CH_3$ | Cl | Br |
| acyl | H | $CH_3$ | Cl | I |
| acyl | acyl | $CH_3$ | Cl | H |
| acyl | acyl | $CH_3$ | Cl | $NH_2$ |
| acyl | acyl | $CH_3$ | Cl | NH-cyclopropyl |
| acyl | acyl | $CH_3$ | Cl | NH-methyl |
| acyl | acyl | $CH_3$ | Cl | NH-ethyl |
| acyl | acyl | $CH_3$ | Cl | NH-acetyl |
| acyl | acyl | $CH_3$ | Cl | OH |
| acyl | acyl | $CH_3$ | Cl | OMe |
| acyl | acyl | $CH_3$ | Cl | OEt |
| acyl | acyl | $CH_3$ | Cl | O-cyclopropyl |
| acyl | acyl | $CH_3$ | Cl | O-acetyl |
| acyl | acyl | $CH_3$ | Cl | SH |
| acyl | acyl | $CH_3$ | Cl | SMe |
| acyl | acyl | $CH_3$ | Cl | SEt |
| acyl | acyl | $CH_3$ | Cl | S-cyclopropyl |
| acyl | acyl | $CH_3$ | Cl | F |
| acyl | acyl | $CH_3$ | Cl | Cl |
| acyl | acyl | $CH_3$ | Cl | Br |
| acyl | acyl | $CH_3$ | Cl | I |
| acyl | amino acid | $CH_3$ | Cl | H |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | $CH_3$ | Cl | $NH_2$ |
| acyl | amino acid | $CH_3$ | Cl | NH-cyclopropyl |
| acyl | amino acid | $CH_3$ | Cl | NH-methyl |
| acyl | amino acid | $CH_3$ | Cl | NH-ethyl |
| acyl | amino acid | $CH_3$ | Cl | NH-acetyl |
| acyl | amino acid | $CH_3$ | Cl | OH |
| acyl | amino acid | $CH_3$ | Cl | OMe |
| acyl | amino acid | $CH_3$ | Cl | OEt |
| acyl | amino acid | $CH_3$ | Cl | O-cyclopropyl |
| acyl | amino acid | $CH_3$ | Cl | O-acetyl |
| acyl | amino acid | $CH_3$ | Cl | SH |
| acyl | amino acid | $CH_3$ | Cl | SMe |
| acyl | amino acid | $CH_3$ | Cl | SEt |
| acyl | amino acid | $CH_3$ | Cl | S-cyclopropyl |
| acyl | amino acid | $CH_3$ | Cl | F |
| acyl | amino acid | $CH_3$ | Cl | Cl |
| acyl | amino acid | $CH_3$ | Cl | Br |
| acyl | amino acid | $CH_3$ | Cl | I |
| H | acyl | $CH_3$ | Cl | H |
| H | acyl | $CH_3$ | Cl | $NH_2$ |
| H | acyl | $CH_3$ | Cl | NH-cyclopropyl |
| H | acyl | $CH_3$ | Cl | NH-methyl |
| H | acyl | $CH_3$ | Cl | NH-ethyl |
| H | acyl | $CH_3$ | Cl | NH-acetyl |
| H | acyl | $CH_3$ | Cl | OH |
| H | acyl | $CH_3$ | Cl | OMe |
| H | acyl | $CH_3$ | Cl | OEt |
| H | acyl | $CH_3$ | Cl | O-cyclopropyl |
| H | acyl | $CH_3$ | Cl | O-acetyl |
| H | acyl | $CH_3$ | Cl | SH |
| H | acyl | $CH_3$ | Cl | SMe |
| H | acyl | $CH_3$ | Cl | SEt |
| H | acyl | $CH_3$ | Cl | S-cyclopropyl |
| H | acyl | $CH_3$ | Cl | F |
| H | acyl | $CH_3$ | Cl | Cl |
| H | acyl | $CH_3$ | Cl | Br |
| H | acyl | $CH_3$ | Cl | I |
| H | amino acid | $CH_3$ | Cl | H |
| H | amino acid | $CH_3$ | Cl | $NH_2$ |
| H | amino acid | $CH_3$ | Cl | NH-cyclopropyl |
| H | amino acid | $CH_3$ | Cl | NH-methyl |
| H | amino acid | $CH_3$ | Cl | NH-ethyl |
| H | amino acid | $CH_3$ | Cl | NH-acetyl |
| H | amino acid | $CH_3$ | Cl | OH |
| H | amino acid | $CH_3$ | Cl | OMe |
| H | amino acid | $CH_3$ | Cl | OEt |
| H | amino acid | $CH_3$ | Cl | O-cyclopropyl |
| H | amino acid | $CH_3$ | Cl | O-acetyl |
| H | amino acid | $CH_3$ | Cl | SH |
| H | amino acid | $CH_3$ | Cl | SMe |
| H | amino acid | $CH_3$ | Cl | SEt |
| H | amino acid | $CH_3$ | Cl | S-cyclopropyl |
| H | amino acid | $CH_3$ | Cl | F |
| H | amino acid | $CH_3$ | Cl | Cl |
| H | amino acid | $CH_3$ | Cl | Br |
| H | amino acid | $CH_3$ | Cl | I |
| amino acid | amino acid | $CH_3$ | Cl | H |
| amino acid | amino acid | $CH_3$ | Cl | $NH_2$ |
| amino acid | amino acid | $CH_3$ | Cl | NH-cyclopropyl |
| amino acid | amino acid | $CH_3$ | Cl | NH-methyl |
| amino acid | amino acid | $CH_3$ | Cl | NH-ethyl |
| amino acid | amino acid | $CH_3$ | Cl | NH-acetyl |
| amino acid | amino acid | $CH_3$ | Cl | OH |
| amino acid | amino acid | $CH_3$ | Cl | OMe |
| amino acid | amino acid | $CH_3$ | Cl | OEt |
| amino acid | amino acid | $CH_3$ | Cl | O-cyclopropyl |
| amino acid | amino acid | $CH_3$ | Cl | O-acetyl |
| amino acid | amino acid | $CH_3$ | Cl | SH |
| amino acid | amino acid | $CH_3$ | Cl | SMe |
| amino acid | amino acid | $CH_3$ | Cl | SEt |
| amino acid | amino acid | $CH_3$ | Cl | S-cyclopropyl |
| amino acid | amino acid | $CH_3$ | Cl | F |
| amino acid | amino acid | $CH_3$ | Cl | Cl |
| amino acid | amino acid | $CH_3$ | Cl | Br |
| amino acid | amino acid | $CH_3$ | Cl | I |
| amino acid | H | $CH_3$ | Cl | H |
| amino acid | H | $CH_3$ | Cl | $NH_2$ |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | $CH_3$ | Cl | NH-cyclopropyl |
| amino acid | H | $CH_3$ | Cl | NH-methyl |
| amino acid | H | $CH_3$ | Cl | NH-ethyl |
| amino acid | H | $CH_3$ | Cl | NH-acetyl |
| amino acid | H | $CH_3$ | Cl | OH |
| amino acid | H | $CH_3$ | Cl | OMe |
| amino acid | H | $CH_3$ | Cl | OEt |
| amino acid | H | $CH_3$ | Cl | O-cyclopropyl |
| amino acid | H | $CH_3$ | Cl | O-acetyl |
| amino acid | H | $CH_3$ | Cl | SH |
| amino acid | H | $CH_3$ | Cl | SMe |
| amino acid | H | $CH_3$ | Cl | SEt |
| amino acid | H | $CH_3$ | Cl | S-cyclopropyl |
| amino acid | H | $CH_3$ | Cl | F |
| amino acid | H | $CH_3$ | Cl | Cl |
| amino acid | H | $CH_3$ | Cl | Br |
| amino acid | H | $CH_3$ | Cl | I |
| amino acid | acyl | $CH_3$ | Cl | H |
| amino acid | acyl | $CH_3$ | Cl | $NH_2$ |
| amino acid | acyl | $CH_3$ | Cl | NH-cyclopropyl |
| amino acid | acyl | $CH_3$ | Cl | NH-methyl |
| amino acid | acyl | $CH_3$ | Cl | NH-ethyl |
| amino acid | acyl | $CH_3$ | Cl | NH-acetyl |
| amino acid | acyl | $CH_3$ | Cl | OH |
| amino acid | acyl | $CH_3$ | Cl | OMe |
| amino acid | acyl | $CH_3$ | Cl | OEt |
| amino acid | acyl | $CH_3$ | Cl | O-cyclopropyl |
| amino acid | acyl | $CH_3$ | Cl | O-acetyl |
| amino acid | acyl | $CH_3$ | Cl | SH |
| amino acid | acyl | $CH_3$ | Cl | SMe |
| amino acid | acyl | $CH_3$ | Cl | SEt |
| amino acid | acyl | $CH_3$ | Cl | S-cyclopropyl |
| amino acid | acyl | $CH_3$ | Cl | F |
| amino acid | acyl | $CH_3$ | Cl | Cl |
| amino acid | acyl | $CH_3$ | Cl | Br |
| amino acid | acyl | $CH_3$ | Cl | I |
| acyl | H | $CF_3$ | Cl | H |
| acyl | H | $CF_3$ | Cl | $NH_2$ |
| acyl | H | $CF_3$ | Cl | NH-cyclopropyl |
| acyl | H | $CF_3$ | Cl | NH-methyl |
| acyl | H | $CF_3$ | Cl | NH-ethyl |
| acyl | H | $CF_3$ | Cl | NH-acetyl |
| acyl | H | $CF_3$ | Cl | OH |
| acyl | H | $CF_3$ | Cl | OMe |
| acyl | H | $CF_3$ | Cl | OEt |
| acyl | H | $CF_3$ | Cl | O-cyclopropyl |
| acyl | H | $CF_3$ | Cl | O-acetyl |
| acyl | H | $CF_3$ | Cl | SH |
| acyl | H | $CF_3$ | Cl | SMe |
| acyl | H | $CF_3$ | Cl | SEt |
| acyl | H | $CF_3$ | Cl | S-cyclopropyl |
| acyl | H | $CF_3$ | Cl | F |
| acyl | H | $CF_3$ | Cl | Cl |
| acyl | H | $CF_3$ | Cl | Br |
| acyl | H | $CF_3$ | Cl | I |
| acyl | acyl | $CF_3$ | Cl | H |
| acyl | acyl | $CF_3$ | Cl | $NH_2$ |
| acyl | acyl | $CF_3$ | Cl | NH-cyclopropyl |
| acyl | acyl | $CF_3$ | Cl | NH-methyl |
| acyl | acyl | $CF_3$ | Cl | NH-ethyl |
| acyl | acyl | $CF_3$ | Cl | NH-acetyl |
| acyl | acyl | $CF_3$ | Cl | OH |
| acyl | acyl | $CF_3$ | Cl | OMe |
| acyl | acyl | $CF_3$ | Cl | OEt |
| acyl | acyl | $CF_3$ | Cl | O-cyclopropyl |
| acyl | acyl | $CF_3$ | Cl | O-acetyl |
| acyl | acyl | $CF_3$ | Cl | SH |
| acyl | acyl | $CF_3$ | Cl | SMe |
| acyl | acyl | $CF_3$ | Cl | SEt |
| acyl | acyl | $CF_3$ | Cl | S-cyclopropyl |
| acyl | acyl | $CF_3$ | Cl | F |
| acyl | acyl | $CF_3$ | Cl | Cl |
| acyl | acyl | $CF_3$ | Cl | Br |
| acyl | acyl | $CF_3$ | Cl | I |
| acyl | amino acid | $CF_3$ | Cl | H |
| acyl | amino acid | $CF_3$ | Cl | $NH_2$ |
| acyl | amino acid | $CF_3$ | Cl | NH-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | $CF_3$ | Cl | NH-methyl |
| acyl | amino acid | $CF_3$ | Cl | NH-ethyl |
| acyl | amino acid | $CF_3$ | Cl | NH-acetyl |
| acyl | amino acid | $CF_3$ | Cl | OH |
| acyl | amino acid | $CF_3$ | Cl | OMe |
| acyl | amino acid | $CF_3$ | Cl | OEt |
| acyl | amino acid | $CF_3$ | Cl | O-cyclopropyl |
| acyl | amino acid | $CF_3$ | Cl | O-acetyl |
| acyl | amino acid | $CF_3$ | Cl | SH |
| acyl | amino acid | $CF_3$ | Cl | SMe |
| acyl | amino acid | $CF_3$ | Cl | SEt |
| acyl | amino acid | $CF_3$ | Cl | S-cyclopropyl |
| acyl | amino acid | $CF_3$ | Cl | F |
| acyl | amino acid | $CF_3$ | Cl | Cl |
| acyl | amino acid | $CF_3$ | Cl | Br |
| acyl | amino acid | $CF_3$ | Cl | I |
| H | acyl | $CF_3$ | Cl | H |
| H | acyl | $CF_3$ | Cl | $NH_2$ |
| H | acyl | $CF_3$ | Cl | NH-cyclopropyl |
| H | acyl | $CF_3$ | Cl | NH-methyl |
| H | acyl | $CF_3$ | Cl | NH-ethyl |
| H | acyl | $CF_3$ | Cl | NH-acetyl |
| H | acyl | $CF_3$ | Cl | OH |
| H | acyl | $CF_3$ | Cl | OMe |
| H | acyl | $CF_3$ | Cl | OEt |
| H | acyl | $CF_3$ | Cl | O-cyclopropyl |
| H | acyl | $CF_3$ | Cl | O-acetyl |
| H | acyl | $CF_3$ | Cl | SH |
| H | acyl | $CF_3$ | Cl | SMe |
| H | acyl | $CF_3$ | Cl | SEt |
| H | acyl | $CF_3$ | Cl | S-cyclopropyl |
| H | acyl | $CF_3$ | Cl | F |
| H | acyl | $CF_3$ | Cl | Cl |
| H | acyl | $CF_3$ | Cl | Br |
| H | acyl | $CF_3$ | Cl | I |
| H | amino acid | $CF_3$ | Cl | H |
| H | amino acid | $CF_3$ | Cl | $NH_2$ |
| H | amino acid | $CF_3$ | Cl | NH-cyclopropyl |
| H | amino acid | $CF_3$ | Cl | NH-methyl |
| H | amino acid | $CF_3$ | Cl | NH-ethyl |
| H | amino acid | $CF_3$ | Cl | NH-acetyl |
| H | amino acid | $CF_3$ | Cl | OH |
| H | amino acid | $CF_3$ | Cl | OMe |
| H | amino acid | $CF_3$ | Cl | OEt |
| H | amino acid | $CF_3$ | Cl | O-cyclopropyl |
| H | amino acid | $CF_3$ | Cl | O-acetyl |
| H | amino acid | $CF_3$ | Cl | SH |
| H | amino acid | $CF_3$ | Cl | SMe |
| H | amino acid | $CF_3$ | Cl | SEt |
| H | amino acid | $CF_3$ | Cl | S-cyclopropyl |
| H | amino acid | $CF_3$ | Cl | F |
| H | amino acid | $CF_3$ | Cl | Cl |
| H | amino acid | $CF_3$ | Cl | Br |
| H | amino acid | $CF_3$ | Cl | I |
| amino acid | amino acid | $CF_3$ | Cl | H |
| amino acid | amino acid | $CF_3$ | Cl | $NH_2$ |
| amino acid | amino acid | $CF_3$ | Cl | NH-cyclopropyl |
| amino acid | amino acid | $CF_3$ | Cl | NH-methyl |
| amino acid | amino acid | $CF_3$ | Cl | NH-ethyl |
| amino acid | amino acid | $CF_3$ | Cl | NH-acetyl |
| amino acid | amino acid | $CF_3$ | Cl | OH |
| amino acid | amino acid | $CF_3$ | Cl | OMe |
| amino acid | amino acid | $CF_3$ | Cl | OEt |
| amino acid | amino acid | $CF_3$ | Cl | O-cyclopropyl |
| amino acid | amino acid | $CF_3$ | Cl | O-acetyl |
| amino acid | amino acid | $CF_3$ | Cl | SH |
| amino acid | amino acid | $CF_3$ | Cl | SMe |
| amino acid | amino acid | $CF_3$ | Cl | SEt |
| amino acid | amino acid | $CF_3$ | Cl | S-cyclopropyl |
| amino acid | amino acid | $CF_3$ | Cl | F |
| amino acid | amino acid | $CF_3$ | Cl | Cl |
| amino acid | amino acid | $CF_3$ | Cl | Br |
| amino acid | amino acid | $CF_3$ | Cl | I |
| amino acid | H | $CF_3$ | Cl | H |
| amino acid | H | $CF_3$ | Cl | $NH_2$ |
| amino acid | H | $CF_3$ | Cl | NH-cyclopropyl |
| amino acid | H | $CF_3$ | Cl | NH-methyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | $CF_3$ | Cl | NH-ethyl |
| amino acid | H | $CF_3$ | Cl | NH-acetyl |
| amino acid | H | $CF_3$ | Cl | OH |
| amino acid | H | $CF_3$ | Cl | OMe |
| amino acid | H | $CF_3$ | Cl | OEt |
| amino acid | H | $CF_3$ | Cl | O-cyclopropyl |
| amino acid | H | $CF_3$ | Cl | O-acetyl |
| amino acid | H | $CF_3$ | Cl | SH |
| amino acid | H | $CF_3$ | Cl | SMe |
| amino acid | H | $CF_3$ | Cl | SEt |
| amino acid | H | $CF_3$ | Cl | S-cyclopropyl |
| amino acid | H | $CF_3$ | Cl | F |
| amino acid | H | $CF_3$ | Cl | Cl |
| amino acid | H | $CF_3$ | Cl | Br |
| amino acid | H | $CF_3$ | Cl | I |
| amino acid | acyl | $CF_3$ | Cl | H |
| amino acid | acyl | $CF_3$ | Cl | $NH_2$ |
| amino acid | acyl | $CF_3$ | Cl | NH-cyclopropyl |
| amino acid | acyl | $CF_3$ | Cl | NH-methyl |
| amino acid | acyl | $CF_3$ | Cl | NH-ethyl |
| amino acid | acyl | $CF_3$ | Cl | NH-acetyl |
| amino acid | acyl | $CF_3$ | Cl | OH |
| amino acid | acyl | $CF_3$ | Cl | OMe |
| amino acid | acyl | $CF_3$ | Cl | OEt |
| amino acid | acyl | $CF_3$ | Cl | O-cyclopropyl |
| amino acid | acyl | $CF_3$ | Cl | O-acetyl |
| amino acid | acyl | $CF_3$ | Cl | SH |
| amino acid | acyl | $CF_3$ | Cl | SMe |
| amino acid | acyl | $CF_3$ | Cl | SEt |
| amino acid | acyl | $CF_3$ | Cl | S-cyclopropyl |
| amino acid | acyl | $CF_3$ | Cl | F |
| amino acid | acyl | $CF_3$ | Cl | Cl |
| amino acid | acyl | $CF_3$ | Cl | Br |
| amino acid | acyl | $CF_3$ | Cl | I |
| acyl | H | Br | Cl | H |
| acyl | H | Br | Cl | $NH_2$ |
| acyl | H | Br | Cl | NH-cyclopropyl |
| acyl | H | Br | Cl | NH-methyl |
| acyl | H | Br | Cl | NH-ethyl |
| acyl | H | Br | Cl | NH-acetyl |
| acyl | H | Br | Cl | OH |
| acyl | H | Br | Cl | OMe |
| acyl | H | Br | Cl | OEt |
| acyl | H | Br | Cl | O-cyclopropyl |
| acyl | H | Br | Cl | O-acetyl |
| acyl | H | Br | Cl | SH |
| acyl | H | Br | Cl | SMe |
| acyl | H | Br | Cl | SEt |
| acyl | H | Br | Cl | S-cyclopropyl |
| acyl | H | Br | Cl | F |
| acyl | H | Br | Cl | Cl |
| acyl | H | Br | Cl | Br |
| acyl | H | Br | Cl | I |
| acyl | acyl | Br | Cl | H |
| acyl | acyl | Br | Cl | $NH_2$ |
| acyl | acyl | Br | Cl | NH-cyclopropyl |
| acyl | acyl | Br | Cl | NH-methyl |
| acyl | acyl | Br | Cl | NH-ethyl |
| acyl | acyl | Br | Cl | NH-acetyl |
| acyl | acyl | Br | Cl | OH |
| acyl | acyl | Br | Cl | OMe |
| acyl | acyl | Br | Cl | OEt |
| acyl | acyl | Br | Cl | O-cyclopropyl |
| acyl | acyl | Br | Cl | O-acetyl |
| acyl | acyl | Br | Cl | SH |
| acyl | acyl | Br | Cl | SMe |
| acyl | acyl | Br | Cl | SEt |
| acyl | acyl | Br | Cl | S-cyclopropyl |
| acyl | acyl | Br | Cl | F |
| acyl | acyl | Br | Cl | Cl |
| acyl | acyl | Br | Cl | Br |
| acyl | acyl | Br | Cl | I |
| acyl | amino acid | Br | Cl | H |
| acyl | amino acid | Br | Cl | $NH_2$ |
| acyl | amino acid | Br | Cl | NH-cyclopropyl |
| acyl | amino acid | Br | Cl | NH-methyl |
| acyl | amino acid | Br | Cl | NH-ethyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | Br | Cl | NH-acetyl |
| acyl | amino acid | Br | Cl | OH |
| acyl | amino acid | Br | Cl | OMe |
| acyl | amino acid | Br | Cl | OEt |
| acyl | amino acid | Br | Cl | O-cyclopropyl |
| acyl | amino acid | Br | Cl | O-acetyl |
| acyl | amino acid | Br | Cl | SH |
| acyl | amino acid | Br | Cl | SMe |
| acyl | amino acid | Br | Cl | SEt |
| acyl | amino acid | Br | Cl | S-cyclopropyl |
| acyl | amino acid | Br | Cl | F |
| acyl | amino acid | Br | Cl | Cl |
| acyl | amino acid | Br | Cl | Br |
| acyl | amino acid | Br | Cl | I |
| H | acyl | Br | Cl | H |
| H | acyl | Br | Cl | $NH_2$ |
| H | acyl | Br | Cl | NH-cyclopropyl |
| H | acyl | Br | Cl | NH-methyl |
| H | acyl | Br | Cl | NH-ethyl |
| H | acyl | Br | Cl | NH-acetyl |
| H | acyl | Br | Cl | OH |
| H | acyl | Br | Cl | OMe |
| H | acyl | Br | Cl | OEt |
| H | acyl | Br | Cl | O-cyclopropyl |
| H | acyl | Br | Cl | O-acetyl |
| H | acyl | Br | Cl | SH |
| H | acyl | Br | Cl | SMe |
| H | acyl | Br | Cl | SEt |
| H | acyl | Br | Cl | S-cyclopropyl |
| H | acyl | Br | Cl | F |
| H | acyl | Br | Cl | Cl |
| H | acyl | Br | Cl | Br |
| H | acyl | Br | Cl | I |
| H | amino acid | Br | Cl | H |
| H | amino acid | Br | Cl | $NH_2$ |
| H | amino acid | Br | Cl | NH-cyclopropyl |
| H | amino acid | Br | Cl | NH-methyl |
| H | amino acid | Br | Cl | NH-ethyl |
| H | amino acid | Br | Cl | NH-acetyl |
| H | amino acid | Br | Cl | OH |
| H | amino acid | Br | Cl | OMe |
| H | amino acid | Br | Cl | OEt |
| H | amino acid | Br | Cl | O-cyclopropyl |
| H | amino acid | Br | Cl | O-acetyl |
| H | amino acid | Br | Cl | SH |
| H | amino acid | Br | Cl | SMe |
| H | amino acid | Br | Cl | SEt |
| H | amino acid | Br | Cl | S-cyclopropyl |
| H | amino acid | Br | Cl | F |
| H | amino acid | Br | Cl | Cl |
| H | amino acid | Br | Cl | Br |
| H | amino acid | Br | Cl | I |
| amino acid | amino acid | Br | Cl | H |
| amino acid | amino acid | Br | Cl | $NH_2$ |
| amino acid | amino acid | Br | Cl | NH-cyclopropyl |
| amino acid | amino acid | Br | Cl | NH-methyl |
| amino acid | amino acid | Br | Cl | NH-ethyl |
| amino acid | amino acid | Br | Cl | NH-acetyl |
| amino acid | amino acid | Br | Cl | OH |
| amino acid | amino acid | Br | Cl | OMe |
| amino acid | amino acid | Br | Cl | OEt |
| amino acid | amino acid | Br | Cl | O-cyclopropyl |
| amino acid | amino acid | Br | Cl | O-acetyl |
| amino acid | amino acid | Br | Cl | SH |
| amino acid | amino acid | Br | Cl | SMe |
| amino acid | amino acid | Br | Cl | SEt |
| amino acid | amino acid | Br | Cl | S-cyclopropyl |
| amino acid | amino acid | Br | Cl | F |
| amino acid | amino acid | Br | Cl | Cl |
| amino acid | amino acid | Br | Cl | Br |
| amino acid | amino acid | Br | Cl | I |
| amino acid | H | Br | Cl | H |
| amino acid | H | Br | Cl | $NH_2$ |
| amino acid | H | Br | Cl | NH-cyclopropyl |
| amino acid | H | Br | Cl | NH-methyl |
| amino acid | H | Br | Cl | NH-ethyl |
| amino acid | H | Br | Cl | NH-acetyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | Br | Cl | OH |
| amino acid | H | Br | Cl | OMe |
| amino acid | H | Br | Cl | OEt |
| amino acid | H | Br | Cl | O-cyclopropyl |
| amino acid | H | Br | Cl | O-acetyl |
| amino acid | H | Br | Cl | SH |
| amino acid | H | Br | Cl | SMe |
| amino acid | H | Br | Cl | SEt |
| amino acid | H | Br | Cl | S-cyclopropyl |
| amino acid | H | Br | Cl | F |
| amino acid | H | Br | Cl | Cl |
| amino acid | H | Br | Cl | Br |
| amino acid | H | Br | Cl | I |
| amino acid | acyl | Br | Cl | H |
| amino acid | acyl | Br | Cl | $NH_2$ |
| amino acid | acyl | Br | Cl | NH-cyclopropyl |
| amino acid | acyl | Br | Cl | NH-methyl |
| amino acid | acyl | Br | Cl | NH-ethyl |
| amino acid | acyl | Br | Cl | NH-acetyl |
| amino acid | acyl | Br | Cl | OH |
| amino acid | acyl | Br | Cl | OMe |
| amino acid | acyl | Br | Cl | OEt |
| amino acid | acyl | Br | Cl | O-cyclopropyl |
| amino acid | acyl | Br | Cl | O-acetyl |
| amino acid | acyl | Br | Cl | SH |
| amino acid | acyl | Br | Cl | SMe |
| amino acid | acyl | Br | Cl | SEt |
| amino acid | acyl | Br | Cl | S-cyclopropyl |
| amino acid | acyl | Br | Cl | F |
| amino acid | acyl | Br | Cl | Cl |
| amino acid | acyl | Br | Cl | Br |
| amino acid | acyl | Br | Cl | I |
| acyl | H | Cl | Cl | H |
| acyl | H | Cl | Cl | $NH_2$ |
| acyl | H | Cl | Cl | NH-cyclopropyl |
| acyl | H | Cl | Cl | NH-methyl |
| acyl | H | Cl | Cl | NH-ethyl |
| acyl | H | Cl | Cl | NH-acetyl |
| acyl | H | Cl | Cl | OH |
| acyl | H | Cl | Cl | OMe |
| acyl | H | Cl | Cl | OEt |
| acyl | H | Cl | Cl | O-cyclopropyl |
| acyl | H | Cl | Cl | O-acetyl |
| acyl | H | Cl | Cl | SH |
| acyl | H | Cl | Cl | SMe |
| acyl | H | Cl | Cl | SEt |
| acyl | H | Cl | Cl | S-cyclopropyl |
| acyl | H | Cl | Cl | F |
| acyl | H | Cl | Cl | Cl |
| acyl | H | Cl | Cl | Br |
| acyl | H | Cl | Cl | I |
| acyl | acyl | Cl | Cl | H |
| acyl | acyl | Cl | Cl | $NH_2$ |
| acyl | acyl | Cl | Cl | NH-cyclopropyl |
| acyl | acyl | Cl | Cl | NH-methyl |
| acyl | acyl | Cl | Cl | NH-ethyl |
| acyl | acyl | Cl | Cl | NH-acetyl |
| acyl | acyl | Cl | Cl | OH |
| acyl | acyl | Cl | Cl | OMe |
| acyl | acyl | Cl | Cl | OEt |
| acyl | acyl | Cl | Cl | O-cyclopropyl |
| acyl | acyl | Cl | Cl | O-acetyl |
| acyl | acyl | Cl | Cl | SH |
| acyl | acyl | Cl | Cl | SMe |
| acyl | acyl | Cl | Cl | SEt |
| acyl | acyl | Cl | Cl | S-cyclopropyl |
| acyl | acyl | Cl | Cl | F |
| acyl | acyl | Cl | Cl | Cl |
| acyl | acyl | Cl | Cl | Br |
| acyl | acyl | Cl | Cl | I |
| acyl | amino acid | Cl | Cl | H |
| acyl | amino acid | Cl | Cl | $NH_2$ |
| acyl | amino acid | Cl | Cl | NH-cyclopropyl |
| acyl | amino acid | Cl | Cl | NH-methyl |
| acyl | amino acid | Cl | Cl | NH-ethyl |
| acyl | amino acid | Cl | Cl | NH-acetyl |
| acyl | amino acid | Cl | Cl | OH |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | Cl | Cl | OMe |
| acyl | amino acid | Cl | Cl | OEt |
| acyl | amino acid | Cl | Cl | O-cyclopropyl |
| acyl | amino acid | Cl | Cl | O-acetyl |
| acyl | amino acid | Cl | Cl | SH |
| acyl | amino acid | Cl | Cl | SMe |
| acyl | amino acid | Cl | Cl | SEt |
| acyl | amino acid | Cl | Cl | S-cyclopropyl |
| acyl | amino acid | Cl | Cl | F |
| acyl | amino acid | Cl | Cl | Cl |
| acyl | amino acid | Cl | Cl | Br |
| acyl | amino acid | Cl | Cl | I |
| H | acyl | Cl | Cl | H |
| H | acyl | Cl | Cl | $NH_2$ |
| H | acyl | Cl | Cl | NH-cyclopropyl |
| H | acyl | Cl | Cl | NH-methyl |
| H | acyl | Cl | Cl | NH-ethyl |
| H | acyl | Cl | Cl | NH-acetyl |
| H | acyl | Cl | Cl | OH |
| H | acyl | Cl | Cl | OMe |
| H | acyl | Cl | Cl | OEt |
| H | acyl | Cl | Cl | O-cyclopropyl |
| H | acyl | Cl | Cl | O-acetyl |
| H | acyl | Cl | Cl | SH |
| H | acyl | Cl | Cl | SMe |
| H | acyl | Cl | Cl | SEt |
| H | acyl | Cl | Cl | S-cyclopropyl |
| H | acyl | Cl | Cl | F |
| H | acyl | Cl | Cl | Cl |
| H | acyl | Cl | Cl | Br |
| H | acyl | Cl | Cl | I |
| H | amino acid | Cl | Cl | H |
| H | amino acid | Cl | Cl | $NH_2$ |
| H | amino acid | Cl | Cl | NH-cyclopropyl |
| H | amino acid | Cl | Cl | NH-methyl |
| H | amino acid | Cl | Cl | NH-ethyl |
| H | amino acid | Cl | Cl | NH-acetyl |
| H | amino acid | Cl | Cl | OH |
| H | amino acid | Cl | Cl | OMe |
| H | amino acid | Cl | Cl | OEt |
| H | amino acid | Cl | Cl | O-cyclopropyl |
| H | amino acid | Cl | Cl | O-acetyl |
| H | amino acid | Cl | Cl | SH |
| H | amino acid | Cl | Cl | SMe |
| H | amino acid | Cl | Cl | SEt |
| H | amino acid | Cl | Cl | S-cyclopropyl |
| H | amino acid | Cl | Cl | F |
| H | amino acid | Cl | Cl | Cl |
| H | amino acid | Cl | Cl | Br |
| H | amino acid | Cl | Cl | I |
| amino acid | amino acid | Cl | Cl | H |
| amino acid | amino acid | Cl | Cl | $NH_2$ |
| amino acid | amino acid | Cl | Cl | NH-cyclopropyl |
| amino acid | amino acid | Cl | Cl | NH-methyl |
| amino acid | amino acid | Cl | Cl | NH-ethyl |
| amino acid | amino acid | Cl | Cl | NH-acetyl |
| amino acid | amino acid | Cl | Cl | OH |
| amino acid | amino acid | Cl | Cl | OMe |
| amino acid | amino acid | Cl | Cl | OEt |
| amino acid | amino acid | Cl | Cl | O-cyclopropyl |
| amino acid | amino acid | Cl | Cl | O-acetyl |
| amino acid | amino acid | Cl | Cl | SH |
| amino acid | amino acid | Cl | Cl | SMe |
| amino acid | amino acid | Cl | Cl | SEt |
| amino acid | amino acid | Cl | Cl | S-cyclopropyl |
| amino acid | amino acid | Cl | Cl | F |
| amino acid | amino acid | Cl | Cl | Cl |
| amino acid | amino acid | Cl | Cl | Br |
| amino acid | amino acid | Cl | Cl | I |
| amino acid | H | Cl | Cl | H |
| amino acid | H | Cl | Cl | $NH_2$ |
| amino acid | H | Cl | Cl | NH-cyclopropyl |
| amino acid | H | Cl | Cl | NH-methyl |
| amino acid | H | Cl | Cl | NH-ethyl |
| amino acid | H | Cl | Cl | NH-acetyl |
| amino acid | H | Cl | Cl | OH |
| amino acid | H | Cl | Cl | OMe |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | Cl | Cl | OEt |
| amino acid | H | Cl | Cl | O-cyclopropyl |
| amino acid | H | Cl | Cl | O-acetyl |
| amino acid | H | Cl | Cl | SH |
| amino acid | H | Cl | Cl | SMe |
| amino acid | H | Cl | Cl | SEt |
| amino acid | H | Cl | Cl | S-cyclopropyl |
| amino acid | H | Cl | Cl | F |
| amino acid | H | Cl | Cl | Cl |
| amino acid | H | Cl | Cl | Br |
| amino acid | H | Cl | Cl | I |
| amino acid | acyl | Cl | Cl | H |
| amino acid | acyl | Cl | Cl | $NH_2$ |
| amino acid | acyl | Cl | Cl | NH-cyclopropyl |
| amino acid | acyl | Cl | Cl | NH-methyl |
| amino acid | acyl | Cl | Cl | NH-ethyl |
| amino acid | acyl | Cl | Cl | NH-acetyl |
| amino acid | acyl | Cl | Cl | OH |
| amino acid | acyl | Cl | Cl | OMe |
| amino acid | acyl | Cl | Cl | OEt |
| amino acid | acyl | Cl | Cl | O-cyclopropyl |
| amino acid | acyl | Cl | Cl | O-acetyl |
| amino acid | acyl | Cl | Cl | SH |
| amino acid | acyl | Cl | Cl | SMe |
| amino acid | acyl | Cl | Cl | SEt |
| amino acid | acyl | Cl | Cl | S-cyclopropyl |
| amino acid | acyl | Cl | Cl | F |
| amino acid | acyl | Cl | Cl | Cl |
| amino acid | acyl | Cl | Cl | Br |
| amino acid | acyl | Cl | Cl | I |
| acyl | H | F | Cl | H |
| acyl | H | F | Cl | $NH_2$ |
| acyl | H | F | Cl | NH-cyclopropyl |
| acyl | H | F | Cl | NH-methyl |
| acyl | H | F | Cl | NH-ethyl |
| acyl | H | F | Cl | NH-acetyl |
| acyl | H | F | Cl | OH |
| acyl | H | F | Cl | OMe |
| acyl | H | F | Cl | OEt |
| acyl | H | F | Cl | O-cyclopropyl |
| acyl | H | F | Cl | O-acetyl |
| acyl | H | F | Cl | SH |
| acyl | H | F | Cl | SMe |
| acyl | H | F | Cl | SEt |
| acyl | H | F | Cl | S-cyclopropyl |
| acyl | H | F | Cl | F |
| acyl | H | F | Cl | Cl |
| acyl | H | F | Cl | Br |
| acyl | H | F | Cl | I |
| acyl | acyl | F | Cl | H |
| acyl | acyl | F | Cl | $NH_2$ |
| acyl | acyl | F | Cl | NH-cyclopropyl |
| acyl | acyl | F | Cl | NH-methyl |
| acyl | acyl | F | Cl | NH-ethyl |
| acyl | acyl | F | Cl | NH-acetyl |
| acyl | acyl | F | Cl | OH |
| acyl | acyl | F | Cl | OMe |
| acyl | acyl | F | Cl | OEt |
| acyl | acyl | F | Cl | O-cyclopropyl |
| acyl | acyl | F | Cl | O-acetyl |
| acyl | acyl | F | Cl | SH |
| acyl | acyl | F | Cl | SMe |
| acyl | acyl | F | Cl | SEt |
| acyl | acyl | F | Cl | S-cyclopropyl |
| acyl | acyl | F | Cl | F |
| acyl | acyl | F | Cl | Cl |
| acyl | acyl | F | Cl | Br |
| acyl | acyl | F | Cl | I |
| acyl | amino acid | F | Cl | H |
| acyl | amino acid | F | Cl | $NH_2$ |
| acyl | amino acid | F | Cl | NH-cyclopropyl |
| acyl | amino acid | F | Cl | NH-methyl |
| acyl | amino acid | F | Cl | NH-ethyl |
| acyl | amino acid | F | Cl | NH-acetyl |
| acyl | amino acid | F | Cl | OH |
| acyl | amino acid | F | Cl | OMe |
| acyl | amino acid | F | Cl | OEt |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | F | Cl | O-cyclopropyl |
| acyl | amino acid | F | Cl | O-acetyl |
| acyl | amino acid | F | Cl | SH |
| acyl | amino acid | F | Cl | SMe |
| acyl | amino acid | F | Cl | SEt |
| acyl | amino acid | F | Cl | S-cyclopropyl |
| acyl | amino acid | F | Cl | F |
| acyl | amino acid | F | Cl | Cl |
| acyl | amino acid | F | Cl | Br |
| acyl | amino acid | F | Cl | I |
| H | acyl | F | Cl | H |
| H | acyl | F | Cl | $NH_2$ |
| H | acyl | F | Cl | NH-cyclopropyl |
| H | acyl | F | Cl | NH-methyl |
| H | acyl | F | Cl | NH-ethyl |
| H | acyl | F | Cl | NH-acetyl |
| H | acyl | F | Cl | OH |
| H | acyl | F | Cl | OMe |
| H | acyl | F | Cl | OEt |
| H | acyl | F | Cl | O-cyclopropyl |
| H | acyl | F | Cl | O-acetyl |
| H | acyl | F | Cl | SH |
| H | acyl | F | Cl | SMe |
| H | acyl | F | Cl | SEt |
| H | acyl | F | Cl | S-cyclopropyl |
| H | acyl | F | Cl | F |
| H | acyl | F | Cl | Cl |
| H | acyl | F | Cl | Br |
| H | acyl | F | Cl | I |
| H | amino acid | F | Cl | H |
| H | amino acid | F | Cl | $NH_2$ |
| H | amino acid | F | Cl | NH-cyclopropyl |
| H | amino acid | F | Cl | NH-methyl |
| H | amino acid | F | Cl | NH-ethyl |
| H | amino acid | F | Cl | NH-acetyl |
| H | amino acid | F | Cl | OH |
| H | amino acid | F | Cl | OMe |
| H | amino acid | F | Cl | OEt |
| H | amino acid | F | Cl | O-cyclopropyl |
| H | amino acid | F | Cl | O-acetyl |
| H | amino acid | F | Cl | SH |
| H | amino acid | F | Cl | SMe |
| H | amino acid | F | Cl | SEt |
| H | amino acid | F | Cl | S-cyclopropyl |
| H | amino acid | F | Cl | F |
| H | amino acid | F | Cl | Cl |
| H | amino acid | F | Cl | Br |
| H | amino acid | F | Cl | I |
| amino acid | amino acid | F | Cl | H |
| amino acid | amino acid | F | Cl | $NH_2$ |
| amino acid | amino acid | F | Cl | NH-cyclopropyl |
| amino acid | amino acid | F | Cl | NH-methyl |
| amino acid | amino acid | F | Cl | NH-ethyl |
| amino acid | amino acid | F | Cl | NH-acetyl |
| amino acid | amino acid | F | Cl | OH |
| amino acid | amino acid | F | Cl | OMe |
| amino acid | amino acid | F | Cl | OEt |
| amino acid | amino acid | F | Cl | O-cyclopropyl |
| amino acid | amino acid | F | Cl | O-acetyl |
| amino acid | amino acid | F | Cl | SH |
| amino acid | amino acid | F | Cl | SMe |
| amino acid | amino acid | F | Cl | SEt |
| amino acid | amino acid | F | Cl | S-cyclopropyl |
| amino acid | amino acid | F | Cl | F |
| amino acid | amino acid | F | Cl | Cl |
| amino acid | amino acid | F | Cl | Br |
| amino acid | amino acid | F | Cl | I |
| amino acid | H | F | Cl | H |
| amino acid | H | F | Cl | $NH_2$ |
| amino acid | H | F | Cl | NH-cyclopropyl |
| amino acid | H | F | Cl | NH-methyl |
| amino acid | H | F | Cl | NH-ethyl |
| amino acid | H | F | Cl | NH-acetyl |
| amino acid | H | F | Cl | OH |
| amino acid | H | F | Cl | OMe |
| amino acid | H | F | Cl | OEt |
| amino acid | H | F | Cl | O-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | F | Cl | O-acetyl |
| amino acid | H | F | Cl | SH |
| amino acid | H | F | Cl | SMe |
| amino acid | H | F | Cl | SEt |
| amino acid | H | F | Cl | S-cyclopropyl |
| amino acid | H | F | Cl | F |
| amino acid | H | F | Cl | Cl |
| amino acid | H | F | Cl | Br |
| amino acid | H | F | Cl | I |
| amino acid | acyl | F | Cl | H |
| amino acid | acyl | F | Cl | $NH_2$ |
| amino acid | acyl | F | Cl | NH-cyclopropyl |
| amino acid | acyl | F | Cl | NH-methyl |
| amino acid | acyl | F | Cl | NH-ethyl |
| amino acid | acyl | F | Cl | NH-acetyl |
| amino acid | acyl | F | Cl | OH |
| amino acid | acyl | F | Cl | OMe |
| amino acid | acyl | F | Cl | OEt |
| amino acid | acyl | F | Cl | O-cyclopropyl |
| amino acid | acyl | F | Cl | O-acetyl |
| amino acid | acyl | F | Cl | SH |
| amino acid | acyl | F | Cl | SMe |
| amino acid | acyl | F | Cl | SEt |
| amino acid | acyl | F | Cl | S-cyclopropyl |
| amino acid | acyl | F | Cl | F |
| amino acid | acyl | F | Cl | Cl |
| amino acid | acyl | F | Cl | Br |
| amino acid | acyl | F | Cl | I |
| acyl | H | $NH_2$ | Cl | H |
| acyl | H | $NH_2$ | Cl | $NH_2$ |
| acyl | H | $NH_2$ | Cl | NH-cyclopropyl |
| acyl | H | $NH_2$ | Cl | NH-methyl |
| acyl | H | $NH_2$ | Cl | NH-ethyl |
| acyl | H | $NH_2$ | Cl | NH-acetyl |
| acyl | H | $NH_2$ | Cl | OH |
| acyl | H | $NH_2$ | Cl | OMe |
| acyl | H | $NH_2$ | Cl | OEt |
| acyl | H | $NH_2$ | Cl | O-cyclopropyl |
| acyl | H | $NH_2$ | Cl | O-acetyl |
| acyl | H | $NH_2$ | Cl | SH |
| acyl | H | $NH_2$ | Cl | SMe |
| acyl | H | $NH_2$ | Cl | SEt |
| acyl | H | $NH_2$ | Cl | S-cyclopropyl |
| acyl | H | $NH_2$ | Cl | F |
| acyl | H | $NH_2$ | Cl | Cl |
| acyl | H | $NH_2$ | Cl | Br |
| acyl | H | $NH_2$ | Cl | I |
| acyl | acyl | $NH_2$ | Cl | H |
| acyl | acyl | $NH_2$ | Cl | $NH_2$ |
| acyl | acyl | $NH_2$ | Cl | NH-cyclopropyl |
| acyl | acyl | $NH_2$ | Cl | NH-methyl |
| acyl | acyl | $NH_2$ | Cl | NH-ethyl |
| acyl | acyl | $NH_2$ | Cl | NH-acetyl |
| acyl | acyl | $NH_2$ | Cl | OH |
| acyl | acyl | $NH_2$ | Cl | OMe |
| acyl | acyl | $NH_2$ | Cl | OEt |
| acyl | acyl | $NH_2$ | Cl | O-cyclopropyl |
| acyl | acyl | $NH_2$ | Cl | O-acetyl |
| acyl | acyl | $NH_2$ | Cl | SH |
| acyl | acyl | $NH_2$ | Cl | SMe |
| acyl | acyl | $NH_2$ | Cl | SEt |
| acyl | acyl | $NH_2$ | Cl | S-cyclopropyl |
| acyl | acyl | $NH_2$ | Cl | F |
| acyl | acyl | $NH_2$ | Cl | Cl |
| acyl | acyl | $NH_2$ | Cl | Br |
| acyl | acyl | $NH_2$ | Cl | I |
| acyl | amino acid | $NH_2$ | Cl | H |
| acyl | amino acid | $NH_2$ | Cl | $NH_2$ |
| acyl | amino acid | $NH_2$ | Cl | NH-cyclopropyl |
| acyl | amino acid | $NH_2$ | Cl | NH-methyl |
| acyl | amino acid | $NH_2$ | Cl | NH-ethyl |
| acyl | amino acid | $NH_2$ | Cl | NH-acetyl |
| acyl | amino acid | $NH_2$ | Cl | OH |
| acyl | amino acid | $NH_2$ | Cl | OMe |
| acyl | amino acid | $NH_2$ | Cl | OEt |
| acyl | amino acid | $NH_2$ | Cl | O-cyclopropyl |
| acyl | amino acid | $NH_2$ | Cl | O-acetyl |
| acyl | amino acid | $NH_2$ | Cl | SH |
| acyl | amino acid | $NH_2$ | Cl | SMe |
| acyl | amino acid | $NH_2$ | Cl | SEt |
| acyl | amino acid | $NH_2$ | Cl | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | Cl | F |
| acyl | amino acid | $NH_2$ | Cl | Cl |
| acyl | amino acid | $NH_2$ | Cl | Br |
| acyl | amino acid | $NH_2$ | Cl | I |
| amino acid | H | $NH_2$ | Cl | H |
| amino acid | H | $NH_2$ | Cl | $NH_2$ |
| amino acid | H | $NH_2$ | Cl | NH-cyclopropyl |
| amino acid | H | $NH_2$ | Cl | NH-methyl |
| amino acid | H | $NH_2$ | Cl | NH-ethyl |
| amino acid | H | $NH_2$ | Cl | NH-acetyl |
| amino acid | H | $NH_2$ | Cl | OH |
| amino acid | H | $NH_2$ | Cl | OMe |
| amino acid | H | $NH_2$ | Cl | OEt |
| amino acid | H | $NH_2$ | Cl | O-cyclopropyl |
| amino acid | H | $NH_2$ | Cl | O-acetyl |
| amino acid | H | $NH_2$ | Cl | SH |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | $NH_2$ | Cl | SH |
| acyl | amino acid | $NH_2$ | Cl | SMe |
| acyl | amino acid | $NH_2$ | Cl | SEt |
| acyl | amino acid | $NH_2$ | Cl | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | Cl | F |
| acyl | amino acid | $NH_2$ | Cl | Cl |
| acyl | amino acid | $NH_2$ | Cl | Br |
| acyl | amino acid | $NH_2$ | Cl | I |
| H | acyl | $NH_2$ | Cl | H |
| H | acyl | $NH_2$ | Cl | $NH_2$ |
| H | acyl | $NH_2$ | Cl | NH-cyclopropyl |
| H | acyl | $NH_2$ | Cl | NH-methyl |
| H | acyl | $NH_2$ | Cl | NH-ethyl |
| H | acyl | $NH_2$ | Cl | NH-acetyl |
| H | acyl | $NH_2$ | Cl | OH |
| H | acyl | $NH_2$ | Cl | OMe |
| H | acyl | $NH_2$ | Cl | OEt |
| H | acyl | $NH_2$ | Cl | O-cyclopropyl |
| H | acyl | $NH_2$ | Cl | O-acetyl |
| H | acyl | $NH_2$ | Cl | SH |
| H | acyl | $NH_2$ | Cl | SMe |
| H | acyl | $NH_2$ | Cl | SEt |
| H | acyl | $NH_2$ | Cl | S-cyclopropyl |
| H | acyl | $NH_2$ | Cl | F |
| H | acyl | $NH_2$ | Cl | Cl |
| H | acyl | $NH_2$ | Cl | Br |
| H | acyl | $NH_2$ | Cl | I |
| H | amino acid | $NH_2$ | Cl | H |
| H | amino acid | $NH_2$ | Cl | $NH_2$ |
| H | amino acid | $NH_2$ | Cl | NH-cyclopropyl |
| H | amino acid | $NH_2$ | Cl | NH-methyl |
| H | amino acid | $NH_2$ | Cl | NH-ethyl |
| H | amino acid | $NH_2$ | Cl | NH-acetyl |
| H | amino acid | $NH_2$ | Cl | OH |
| H | amino acid | $NH_2$ | Cl | OMe |
| H | amino acid | $NH_2$ | Cl | OEt |
| H | amino acid | $NH_2$ | Cl | O-cyclopropyl |
| H | amino acid | $NH_2$ | Cl | O-acetyl |
| H | amino acid | $NH_2$ | Cl | SH |
| H | amino acid | $NH_2$ | Cl | SMe |
| H | amino acid | $NH_2$ | Cl | SEt |
| H | amino acid | $NH_2$ | Cl | S-cyclopropyl |
| H | amino acid | $NH_2$ | Cl | F |
| H | amino acid | $NH_2$ | Cl | Cl |
| H | amino acid | $NH_2$ | Cl | Br |
| H | amino acid | $NH_2$ | Cl | I |
| amino acid | amino acid | $NH_2$ | Cl | H |
| amino acid | amino acid | $NH_2$ | Cl | $NH_2$ |
| amino acid | amino acid | $NH_2$ | Cl | NH-cyclopropyl |
| amino acid | amino acid | $NH_2$ | Cl | NH-methyl |
| amino acid | amino acid | $NH_2$ | Cl | NH-ethyl |
| amino acid | amino acid | $NH_2$ | Cl | NH-acetyl |
| amino acid | amino acid | $NH_2$ | Cl | OH |
| amino acid | amino acid | $NH_2$ | Cl | OMe |
| amino acid | amino acid | $NH_2$ | Cl | OEt |
| amino acid | amino acid | $NH_2$ | Cl | O-cyclopropyl |
| amino acid | amino acid | $NH_2$ | Cl | O-acetyl |
| amino acid | amino acid | $NH_2$ | Cl | SH |
| amino acid | amino acid | $NH_2$ | Cl | SMe |
| amino acid | amino acid | $NH_2$ | Cl | SEt |
| amino acid | amino acid | $NH_2$ | Cl | S-cyclopropyl |
| amino acid | amino acid | $NH_2$ | Cl | F |
| amino acid | amino acid | $NH_2$ | Cl | Cl |
| amino acid | amino acid | $NH_2$ | Cl | Br |
| amino acid | amino acid | $NH_2$ | Cl | I |
| amino acid | H | $NH_2$ | Cl | H |
| amino acid | H | $NH_2$ | Cl | $NH_2$ |
| amino acid | H | $NH_2$ | Cl | NH-cyclopropyl |
| amino acid | H | $NH_2$ | Cl | NH-methyl |
| amino acid | H | $NH_2$ | Cl | NH-ethyl |
| amino acid | H | $NH_2$ | Cl | NH-acetyl |
| amino acid | H | $NH_2$ | Cl | OH |
| amino acid | H | $NH_2$ | Cl | OMe |
| amino acid | H | $NH_2$ | Cl | OEt |
| amino acid | H | $NH_2$ | Cl | O-cyclopropyl |
| amino acid | H | $NH_2$ | Cl | O-acetyl |
| amino acid | H | $NH_2$ | Cl | SH |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | $NH_2$ | Cl | SMe |
| amino acid | H | $NH_2$ | Cl | SEt |
| amino acid | H | $NH_2$ | Cl | S-cyclopropyl |
| amino acid | H | $NH_2$ | Cl | F |
| amino acid | H | $NH_2$ | Cl | Cl |
| amino acid | H | $NH_2$ | Cl | Br |
| amino acid | H | $NH_2$ | Cl | I |
| amino acid | acyl | $NH_2$ | Cl | H |
| amino acid | acyl | $NH_2$ | Cl | $NH_2$ |
| amino acid | acyl | $NH_2$ | Cl | NH-cyclopropyl |
| amino acid | acyl | $NH_2$ | Cl | NH-methyl |
| amino acid | acyl | $NH_2$ | Cl | NH-ethyl |
| amino acid | acyl | $NH_2$ | Cl | NH-acetyl |
| amino acid | acyl | $NH_2$ | Cl | OH |
| amino acid | acyl | $NH_2$ | Cl | OMe |
| amino acid | acyl | $NH_2$ | Cl | OEt |
| amino acid | acyl | $NH_2$ | Cl | O-cyclopropyl |
| amino acid | acyl | $NH_2$ | Cl | O-acetyl |
| amino acid | acyl | $NH_2$ | Cl | SH |
| amino acid | acyl | $NH_2$ | Cl | SMe |
| amino acid | acyl | $NH_2$ | Cl | SEt |
| amino acid | acyl | $NH_2$ | Cl | S-cyclopropyl |
| amino acid | acyl | $NH_2$ | Cl | F |
| amino acid | acyl | $NH_2$ | Cl | Cl |
| amino acid | acyl | $NH_2$ | Cl | Br |
| amino acid | acyl | $NH_2$ | Cl | I |
| acyl | H | SH | Cl | H |
| acyl | H | SH | Cl | $NH_2$ |
| acyl | H | SH | Cl | NH-cyclopropyl |
| acyl | H | SH | Cl | NH-methyl |
| acyl | H | SH | Cl | NH-ethyl |
| acyl | H | SH | Cl | NH-acetyl |
| acyl | H | SH | Cl | OH |
| acyl | H | SH | Cl | OMe |
| acyl | H | SH | Cl | OEt |
| acyl | H | SH | Cl | O-cyclopropyl |
| acyl | H | SH | Cl | O-acetyl |
| acyl | H | SH | Cl | SH |
| acyl | H | SH | Cl | SMe |
| acyl | H | SH | Cl | SEt |
| acyl | H | SH | Cl | S-cyclopropyl |
| acyl | H | SH | Cl | F |
| acyl | H | SH | Cl | Cl |
| acyl | H | SH | Cl | Br |
| acyl | H | SH | Cl | I |
| acyl | acyl | SH | Cl | H |
| acyl | acyl | SH | Cl | $NH_2$ |
| acyl | acyl | SH | Cl | NH-cyclopropyl |
| acyl | acyl | SH | Cl | NH-methyl |
| acyl | acyl | SH | Cl | NH-ethyl |
| acyl | acyl | SH | Cl | NH-acetyl |
| acyl | acyl | SH | Cl | OH |
| acyl | acyl | SH | Cl | OMe |
| acyl | acyl | SH | Cl | OEt |
| acyl | acyl | SH | Cl | O-cyclopropyl |
| acyl | acyl | SH | Cl | O-acetyl |
| acyl | acyl | SH | Cl | SH |
| acyl | acyl | SH | Cl | SMe |
| acyl | acyl | SH | Cl | SEt |
| acyl | acyl | SH | Cl | S-cyclopropyl |
| acyl | acyl | SH | Cl | F |
| acyl | acyl | SH | Cl | Cl |
| acyl | acyl | SH | Cl | Br |
| acyl | acyl | SH | Cl | I |
| acyl | amino acid | SH | Cl | H |
| acyl | amino acid | SH | Cl | $NH_2$ |
| acyl | amino acid | SH | Cl | NH-cyclopropyl |
| acyl | amino acid | SH | Cl | NH-methyl |
| acyl | amino acid | SH | Cl | NH-ethyl |
| acyl | amino acid | SH | Cl | NH-acetyl |
| acyl | amino acid | SH | Cl | OH |
| acyl | amino acid | SH | Cl | OMe |
| acyl | amino acid | SH | Cl | OEt |
| acyl | amino acid | SH | Cl | O-cyclopropyl |
| acyl | amino acid | SH | Cl | O-acetyl |
| acyl | amino acid | SH | Cl | SH |
| acyl | amino acid | SH | Cl | SMe |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | SH | Cl | SEt |
| acyl | amino acid | SH | Cl | S-cyclopropyl |
| acyl | amino acid | SH | Cl | F |
| acyl | amino acid | SH | Cl | Cl |
| acyl | amino acid | SH | Cl | Br |
| acyl | amino acid | SH | Cl | I |
| H | acyl | SH | Cl | H |
| H | acyl | SH | Cl | $NH_2$ |
| H | acyl | SH | Cl | NH-cyclopropyl |
| H | acyl | SH | Cl | NH-methyl |
| H | acyl | SH | Cl | NH-ethyl |
| H | acyl | SH | Cl | NH-acetyl |
| H | acyl | SH | Cl | OH |
| H | acyl | SH | Cl | OMe |
| H | acyl | SH | Cl | OEt |
| H | acyl | SH | Cl | O-cyclopropyl |
| H | acyl | SH | Cl | O-acetyl |
| H | acyl | SH | Cl | SH |
| H | acyl | SH | Cl | SMe |
| H | acyl | SH | Cl | SEt |
| H | acyl | SH | Cl | S-cyclopropyl |
| H | acyl | SH | Cl | F |
| H | acyl | SH | Cl | Cl |
| H | acyl | SH | Cl | Br |
| H | acyl | SH | Cl | I |
| H | amino acid | SH | Cl | H |
| H | amino acid | SH | Cl | $NH_2$ |
| H | amino acid | SH | Cl | NH-cyclopropyl |
| H | amino acid | SH | Cl | NH-methyl |
| H | amino acid | SH | Cl | NH-ethyl |
| H | amino acid | SH | Cl | NH-acetyl |
| H | amino acid | SH | Cl | OH |
| H | amino acid | SH | Cl | OMe |
| H | amino acid | SH | Cl | OEt |
| H | amino acid | SH | Cl | O-cyclopropyl |
| H | amino acid | SH | Cl | O-acetyl |
| H | amino acid | SH | Cl | SH |
| H | amino acid | SH | Cl | SMe |
| H | amino acid | SH | Cl | SEt |
| H | amino acid | SH | Cl | S-cyclopropyl |
| H | amino acid | SH | Cl | F |
| H | amino acid | SH | Cl | Cl |
| H | amino acid | SH | Cl | Br |
| H | amino acid | SH | Cl | I |
| amino acid | amino acid | SH | Cl | H |
| amino acid | amino acid | SH | Cl | $NH_2$ |
| amino acid | amino acid | SH | Cl | NH-cyclopropyl |
| amino acid | amino acid | SH | Cl | NH-methyl |
| amino acid | amino acid | SH | Cl | NH-ethyl |
| amino acid | amino acid | SH | Cl | NH-acetyl |
| amino acid | amino acid | SH | Cl | OH |
| amino acid | amino acid | SH | Cl | OMe |
| amino acid | amino acid | SH | Cl | OEt |
| amino acid | amino acid | SH | Cl | O-cyclopropyl |
| amino acid | amino acid | SH | Cl | O-acetyl |
| amino acid | amino acid | SH | Cl | SH |
| amino acid | amino acid | SH | Cl | SMe |
| amino acid | amino acid | SH | Cl | SEt |
| amino acid | amino acid | SH | Cl | S-cyclopropyl |
| amino acid | amino acid | SH | Cl | F |
| amino acid | amino acid | SH | Cl | Cl |
| amino acid | amino acid | SH | Cl | Br |
| amino acid | amino acid | SH | Cl | I |
| amino acid | H | SH | Cl | H |
| amino acid | H | SH | Cl | $NH_2$ |
| amino acid | H | SH | Cl | NH-cyclopropyl |
| amino acid | H | SH | Cl | NH-methyl |
| amino acid | H | SH | Cl | NH-ethyl |
| amino acid | H | SH | Cl | NH-acetyl |
| amino acid | H | SH | Cl | OH |
| amino acid | H | SH | Cl | OMe |
| amino acid | H | SH | Cl | OEt |
| amino acid | H | SH | Cl | O-cyclopropyl |
| amino acid | H | SH | Cl | O-acetyl |
| amino acid | H | SH | Cl | SH |
| amino acid | H | SH | Cl | SMe |
| amino acid | H | SH | Cl | SEt |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | SH | Cl | S-cyclopropyl |
| amino acid | H | SH | Cl | F |
| amino acid | H | SH | Cl | Cl |
| amino acid | H | SH | Cl | Br |
| amino acid | H | SH | Cl | I |
| amino acid | acyl | SH | Cl | H |
| amino acid | acyl | SH | Cl | $NH_2$ |
| amino acid | acyl | SH | Cl | NH-cyclopropyl |
| amino acid | acyl | SH | Cl | NH-methyl |
| amino acid | acyl | SH | Cl | NH-ethyl |
| amino acid | acyl | SH | Cl | NH-acetyl |
| amino acid | acyl | SH | Cl | OH |
| amino acid | acyl | SH | Cl | OMe |
| amino acid | acyl | SH | Cl | OEt |
| amino acid | acyl | SH | Cl | O-cyclopropyl |
| amino acid | acyl | SH | Cl | O-acetyl |
| amino acid | acyl | SH | Cl | SH |
| amino acid | acyl | SH | Cl | SMe |
| amino acid | acyl | SH | Cl | SEt |
| amino acid | acyl | SH | Cl | S-cyclopropyl |
| amino acid | acyl | SH | Cl | F |
| amino acid | acyl | SH | Cl | Cl |
| amino acid | acyl | SH | Cl | Br |
| amino acid | acyl | SH | Cl | I |
| acyl | H | OH | Cl | H |
| acyl | H | OH | Cl | $NH_2$ |
| acyl | H | OH | Cl | NH-cyclopropyl |
| acyl | H | OH | Cl | NH-methyl |
| acyl | H | OH | Cl | NH-ethyl |
| acyl | H | OH | Cl | NH-acetyl |
| acyl | H | OH | Cl | OH |
| acyl | H | OH | Cl | OMe |
| acyl | H | OH | Cl | OEt |
| acyl | H | OH | Cl | O-cyclopropyl |
| acyl | H | OH | Cl | O-acetyl |
| acyl | H | OH | Cl | SH |
| acyl | H | OH | Cl | SMe |
| acyl | H | OH | Cl | SEt |
| acyl | H | OH | Cl | S-cyclopropyl |
| acyl | H | OH | Cl | F |
| acyl | H | OH | Cl | Cl |
| acyl | H | OH | Cl | Br |
| acyl | H | OH | Cl | I |
| acyl | acyl | OH | Cl | H |
| acyl | acyl | OH | Cl | $NH_2$ |
| acyl | acyl | OH | Cl | NH-cyclopropyl |
| acyl | acyl | OH | Cl | NH-methyl |
| acyl | acyl | OH | Cl | NH-ethyl |
| acyl | acyl | OH | Cl | NH-acetyl |
| acyl | acyl | OH | Cl | OH |
| acyl | acyl | OH | Cl | OMe |
| acyl | acyl | OH | Cl | OEt |
| acyl | acyl | OH | Cl | O-cyclopropyl |
| acyl | acyl | OH | Cl | O-acetyl |
| acyl | acyl | OH | Cl | SH |
| acyl | acyl | OH | Cl | SMe |
| acyl | acyl | OH | Cl | SEt |
| acyl | acyl | OH | Cl | S-cyclopropyl |
| acyl | acyl | OH | Cl | F |
| acyl | acyl | OH | Cl | Cl |
| acyl | acyl | OH | Cl | Br |
| acyl | acyl | OH | Cl | I |
| acyl | amino acid | OH | Cl | H |
| acyl | amino acid | OH | Cl | $NH_2$ |
| acyl | amino acid | OH | Cl | NH-cyclopropyl |
| acyl | amino acid | OH | Cl | NH-methyl |
| acyl | amino acid | OH | Cl | NH-ethyl |
| acyl | amino acid | OH | Cl | NH-acetyl |
| acyl | amino acid | OH | Cl | OH |
| acyl | amino acid | OH | Cl | OMe |
| acyl | amino acid | OH | Cl | OEt |
| acyl | amino acid | OH | Cl | O-cyclopropyl |
| acyl | amino acid | OH | Cl | O-acetyl |
| acyl | amino acid | OH | Cl | SH |
| acyl | amino acid | OH | Cl | SMe |
| acyl | amino acid | OH | Cl | SEt |
| acyl | amino acid | OH | Cl | S-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | OH | Cl | F |
| acyl | amino acid | OH | Cl | Cl |
| acyl | amino acid | OH | Cl | Br |
| acyl | amino acid | OH | Cl | I |
| H | acyl | OH | Cl | H |
| H | acyl | OH | Cl | $NH_2$ |
| H | acyl | OH | Cl | NH-cyclopropyl |
| H | acyl | OH | Cl | NH-methyl |
| H | acyl | OH | Cl | NH-ethyl |
| H | acyl | OH | Cl | NH-acetyl |
| H | acyl | OH | Cl | OH |
| H | acyl | OH | Cl | OMe |
| H | acyl | OH | Cl | OEt |
| H | acyl | OH | Cl | O-cyclopropyl |
| H | acyl | OH | Cl | O-acetyl |
| H | acyl | OH | Cl | SH |
| H | acyl | OH | Cl | SMe |
| H | acyl | OH | Cl | SEt |
| H | acyl | OH | Cl | S-cyclopropyl |
| H | acyl | OH | Cl | F |
| H | acyl | OH | Cl | Cl |
| H | acyl | OH | Cl | Br |
| H | acyl | OH | Cl | I |
| H | amino acid | OH | Cl | H |
| H | amino acid | OH | Cl | $NH_2$ |
| H | amino acid | OH | Cl | NH-cyclopropyl |
| H | amino acid | OH | Cl | NH-methyl |
| H | amino acid | OH | Cl | NH-ethyl |
| H | amino acid | OH | Cl | NH-acetyl |
| H | amino acid | OH | Cl | OH |
| H | amino acid | OH | Cl | OMe |
| H | amino acid | OH | Cl | OEt |
| H | amino acid | OH | Cl | O-cyclopropyl |
| H | amino acid | OH | Cl | O-acetyl |
| H | amino acid | OH | Cl | SH |
| H | amino acid | OH | Cl | SMe |
| H | amino acid | OH | Cl | SEt |
| H | amino acid | OH | Cl | S-cyclopropyl |
| H | amino acid | OH | Cl | F |
| H | amino acid | OH | Cl | Cl |
| H | amino acid | OH | Cl | Br |
| H | amino acid | OH | Cl | I |
| amino acid | amino acid | OH | Cl | H |
| amino acid | amino acid | OH | Cl | $NH_2$ |
| amino acid | amino acid | OH | Cl | NH-cyclopropyl |
| amino acid | amino acid | OH | Cl | NH-methyl |
| amino acid | amino acid | OH | Cl | NH-ethyl |
| amino acid | amino acid | OH | Cl | NH-acetyl |
| amino acid | amino acid | OH | Cl | OH |
| amino acid | amino acid | OH | Cl | OMe |
| amino acid | amino acid | OH | Cl | OEt |
| amino acid | amino acid | OH | Cl | O-cyclopropyl |
| amino acid | amino acid | OH | Cl | O-acetyl |
| amino acid | amino acid | OH | Cl | SH |
| amino acid | amino acid | OH | Cl | SMe |
| amino acid | amino acid | OH | Cl | SEt |
| amino acid | amino acid | OH | Cl | S-cyclopropyl |
| amino acid | amino acid | OH | Cl | F |
| amino acid | amino acid | OH | Cl | Cl |
| amino acid | amino acid | OH | Cl | Br |
| amino acid | amino acid | OH | Cl | I |
| amino acid | H | OH | Cl | H |
| amino acid | H | OH | Cl | $NH_2$ |
| amino acid | H | OH | Cl | NH-cyclopropyl |
| amino acid | H | OH | Cl | NH-methyl |
| amino acid | H | OH | Cl | NH-ethyl |
| amino acid | H | OH | Cl | NH-acetyl |
| amino acid | H | OH | Cl | OH |
| amino acid | H | OH | Cl | OMe |
| amino acid | H | OH | Cl | OEt |
| amino acid | H | OH | Cl | O-cyclopropyl |
| amino acid | H | OH | Cl | O-acetyl |
| amino acid | H | OH | Cl | SH |
| amino acid | H | OH | Cl | SMe |
| amino acid | H | OH | Cl | SEt |
| amino acid | H | OH | Cl | S-cyclopropyl |
| amino acid | H | OH | Cl | F |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | OH | Cl | Cl |
| amino acid | H | OH | Cl | Br |
| amino acid | H | OH | Cl | I |
| amino acid | acyl | OH | Cl | H |
| amino acid | acyl | OH | Cl | $NH_2$ |
| amino acid | acyl | OH | Cl | NH-cyclopropyl |
| amino acid | acyl | OH | Cl | NH-methyl |
| amino acid | acyl | OH | Cl | NH-ethyl |
| amino acid | acyl | OH | Cl | NH-acetyl |
| amino acid | acyl | OH | Cl | OH |
| amino acid | acyl | OH | Cl | OMe |
| amino acid | acyl | OH | Cl | OEt |
| amino acid | acyl | OH | Cl | O-cyclopropyl |
| amino acid | acyl | OH | Cl | O-acetyl |
| amino acid | acyl | OH | Cl | SH |
| amino acid | acyl | OH | Cl | SMe |
| amino acid | acyl | OH | Cl | SEt |
| amino acid | acyl | OH | Cl | S-cyclopropyl |
| amino acid | acyl | OH | Cl | F |
| amino acid | acyl | OH | Cl | Cl |
| amino acid | acyl | OH | Cl | Br |
| amino acid | acyl | OH | Cl | I |
| acyl | H | $CH_3$ | F | H |
| acyl | H | $CH_3$ | F | $NH_2$ |
| acyl | H | $CH_3$ | F | NH-cyclopropyl |
| acyl | H | $CH_3$ | F | NH-methyl |
| acyl | H | $CH_3$ | F | NH-ethyl |
| acyl | H | $CH_3$ | F | NH-acetyl |
| acyl | H | $CH_3$ | F | OH |
| acyl | H | $CH_3$ | F | OMe |
| acyl | H | $CH_3$ | F | OEt |
| acyl | H | $CH_3$ | F | O-cyclopropyl |
| acyl | H | $CH_3$ | F | O-acetyl |
| acyl | H | $CH_3$ | F | SH |
| acyl | H | $CH_3$ | F | SMe |
| acyl | H | $CH_3$ | F | SEt |
| acyl | H | $CH_3$ | F | S-cyclopropyl |
| acyl | H | $CH_3$ | F | F |
| acyl | H | $CH_3$ | F | Cl |
| acyl | H | $CH_3$ | F | Br |
| acyl | H | $CH_3$ | F | I |
| acyl | acyl | $CH_3$ | F | H |
| acyl | acyl | $CH_3$ | F | $NH_2$ |
| acyl | acyl | $CH_3$ | F | NH-cyclopropyl |
| acyl | acyl | $CH_3$ | F | NH-methyl |
| acyl | acyl | $CH_3$ | F | NH-ethyl |
| acyl | acyl | $CH_3$ | F | NH-acetyl |
| acyl | acyl | $CH_3$ | F | OH |
| acyl | acyl | $CH_3$ | F | OMe |
| acyl | acyl | $CH_3$ | F | OEt |
| acyl | acyl | $CH_3$ | F | O-cyclopropyl |
| acyl | acyl | $CH_3$ | F | O-acetyl |
| acyl | acyl | $CH_3$ | F | SH |
| acyl | acyl | $CH_3$ | F | SMe |
| acyl | acyl | $CH_3$ | F | SEt |
| acyl | acyl | $CH_3$ | F | S-cyclopropyl |
| acyl | acyl | $CH_3$ | F | F |
| acyl | acyl | $CH_3$ | F | Cl |
| acyl | acyl | $CH_3$ | F | Br |
| acyl | acyl | $CH_3$ | F | I |
| acyl | amino acid | $CH_3$ | F | H |
| acyl | amino acid | $CH_3$ | F | $NH_2$ |
| acyl | amino acid | $CH_3$ | F | NH-cyclopropyl |
| acyl | amino acid | $CH_3$ | F | NH-methyl |
| acyl | amino acid | $CH_3$ | F | NH-ethyl |
| acyl | amino acid | $CH_3$ | F | NH-acetyl |
| acyl | amino acid | $CH_3$ | F | OH |
| acyl | amino acid | $CH_3$ | F | OMe |
| acyl | amino acid | $CH_3$ | F | OEt |
| acyl | amino acid | $CH_3$ | F | O-cyclopropyl |
| acyl | amino acid | $CH_3$ | F | O-acetyl |
| acyl | amino acid | $CH_3$ | F | SH |
| acyl | amino acid | $CH_3$ | F | SMe |
| acyl | amino acid | $CH_3$ | F | SEt |
| acyl | amino acid | $CH_3$ | F | S-cyclopropyl |
| acyl | amino acid | $CH_3$ | F | F |
| acyl | amino acid | $CH_3$ | F | Cl |
| acyl | amino acid | $CH_3$ | F | Br |
| acyl | amino acid | $CH_3$ | F | I |
| amino acid | H | $CH_3$ | F | H |
| amino acid | H | $CH_3$ | F | $NH_2$ |
| amino acid | H | $CH_3$ | F | NH-cyclopropyl |
| amino acid | H | $CH_3$ | F | NH-methyl |
| amino acid | H | $CH_3$ | F | NH-ethyl |
| amino acid | H | $CH_3$ | F | NH-acetyl |
| amino acid | H | $CH_3$ | F | OH |
| amino acid | H | $CH_3$ | F | OMe |
| amino acid | H | $CH_3$ | F | OEt |
| amino acid | H | $CH_3$ | F | O-cyclopropyl |
| amino acid | H | $CH_3$ | F | O-acetyl |
| amino acid | H | $CH_3$ | F | SH |
| amino acid | H | $CH_3$ | F | SMe |
| amino acid | H | $CH_3$ | F | SEt |
| amino acid | H | $CH_3$ | F | S-cyclopropyl |
| amino acid | H | $CH_3$ | F | F |
| amino acid | H | $CH_3$ | F | Cl |
| amino acid | H | $CH_3$ | F | Br |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | $CH_3$ | F | Br |
| acyl | amino acid | $CH_3$ | F | I |
| H | acyl | $CH_3$ | F | H |
| H | acyl | $CH_3$ | F | $NH_2$ |
| H | acyl | $CH_3$ | F | NH-cyclopropyl |
| H | acyl | $CH_3$ | F | NH-methyl |
| H | acyl | $CH_3$ | F | NH-ethyl |
| H | acyl | $CH_3$ | F | NH-acetyl |
| H | acyl | $CH_3$ | F | OH |
| H | acyl | $CH_3$ | F | OMe |
| H | acyl | $CH_3$ | F | OEt |
| H | acyl | $CH_3$ | F | O-cyclopropyl |
| H | acyl | $CH_3$ | F | O-acetyl |
| H | acyl | $CH_3$ | F | SH |
| H | acyl | $CH_3$ | F | SMe |
| H | acyl | $CH_3$ | F | SEt |
| H | acyl | $CH_3$ | F | S-cyclopropyl |
| H | acyl | $CH_3$ | F | F |
| H | acyl | $CH_3$ | F | Cl |
| H | acyl | $CH_3$ | F | Br |
| H | acyl | $CH_3$ | F | I |
| H | amino acid | $CH_3$ | F | H |
| H | amino acid | $CH_3$ | F | $NH_2$ |
| H | amino acid | $CH_3$ | F | NH-cyclopropyl |
| H | amino acid | $CH_3$ | F | NH-methyl |
| H | amino acid | $CH_3$ | F | NH-ethyl |
| H | amino acid | $CH_3$ | F | NH-acetyl |
| H | amino acid | $CH_3$ | F | OH |
| H | amino acid | $CH_3$ | F | OMe |
| H | amino acid | $CH_3$ | F | OEt |
| H | amino acid | $CH_3$ | F | O-cyclopropyl |
| H | amino acid | $CH_3$ | F | O-acetyl |
| H | amino acid | $CH_3$ | F | SH |
| H | amino acid | $CH_3$ | F | SMe |
| H | amino acid | $CH_3$ | F | SEt |
| H | amino acid | $CH_3$ | F | S-cyclopropyl |
| H | amino acid | $CH_3$ | F | F |
| H | amino acid | $CH_3$ | F | Cl |
| H | amino acid | $CH_3$ | F | Br |
| H | amino acid | $CH_3$ | F | I |
| amino acid | amino acid | $CH_3$ | F | H |
| amino acid | amino acid | $CH_3$ | F | $NH_2$ |
| amino acid | amino acid | $CH_3$ | F | NH-cyclopropyl |
| amino acid | amino acid | $CH_3$ | F | NH-methyl |
| amino acid | amino acid | $CH_3$ | F | NH-ethyl |
| amino acid | amino acid | $CH_3$ | F | NH-acetyl |
| amino acid | amino acid | $CH_3$ | F | OH |
| amino acid | amino acid | $CH_3$ | F | OMe |
| amino acid | amino acid | $CH_3$ | F | OEt |
| amino acid | amino acid | $CH_3$ | F | O-cyclopropyl |
| amino acid | amino acid | $CH_3$ | F | O-acetyl |
| amino acid | amino acid | $CH_3$ | F | SH |
| amino acid | amino acid | $CH_3$ | F | SMe |
| amino acid | amino acid | $CH_3$ | F | SEt |
| amino acid | amino acid | $CH_3$ | F | S-cyclopropyl |
| amino acid | amino acid | $CH_3$ | F | F |
| amino acid | amino acid | $CH_3$ | F | Cl |
| amino acid | amino acid | $CH_3$ | F | Br |
| amino acid | amino acid | $CH_3$ | F | I |
| amino acid | H | $CH_3$ | F | H |
| amino acid | H | $CH_3$ | F | $NH_2$ |
| amino acid | H | $CH_3$ | F | NH-cyclopropyl |
| amino acid | H | $CH_3$ | F | NH-methyl |
| amino acid | H | $CH_3$ | F | NH-ethyl |
| amino acid | H | $CH_3$ | F | NH-acetyl |
| amino acid | H | $CH_3$ | F | OH |
| amino acid | H | $CH_3$ | F | OMe |
| amino acid | H | $CH_3$ | F | OEt |
| amino acid | H | $CH_3$ | F | O-cyclopropyl |
| amino acid | H | $CH_3$ | F | O-acetyl |
| amino acid | H | $CH_3$ | F | SH |
| amino acid | H | $CH_3$ | F | SMe |
| amino acid | H | $CH_3$ | F | SEt |
| amino acid | H | $CH_3$ | F | S-cyclopropyl |
| amino acid | H | $CH_3$ | F | F |
| amino acid | H | $CH_3$ | F | Cl |
| amino acid | H | $CH_3$ | F | Br |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | $CH_3$ | F | I |
| amino acid | acyl | $CH_3$ | F | H |
| amino acid | acyl | $CH_3$ | F | $NH_2$ |
| amino acid | acyl | $CH_3$ | F | NH-cyclopropyl |
| amino acid | acyl | $CH_3$ | F | NH-methyl |
| amino acid | acyl | $CH_3$ | F | NH-ethyl |
| amino acid | acyl | $CH_3$ | F | NH-acetyl |
| amino acid | acyl | $CH_3$ | F | OH |
| amino acid | acyl | $CH_3$ | F | OMe |
| amino acid | acyl | $CH_3$ | F | OEt |
| amino acid | acyl | $CH_3$ | F | O-cyclopropyl |
| amino acid | acyl | $CH_3$ | F | O-acetyl |
| amino acid | acyl | $CH_3$ | F | SH |
| amino acid | acyl | $CH_3$ | F | SMe |
| amino acid | acyl | $CH_3$ | F | SEt |
| amino acid | acyl | $CH_3$ | F | S-cyclopropyl |
| amino acid | acyl | $CH_3$ | F | F |
| amino acid | acyl | $CH_3$ | F | Cl |
| amino acid | acyl | $CH_3$ | F | Br |
| amino acid | acyl | $CH_3$ | F | I |
| acyl | H | $CF_3$ | F | H |
| acyl | H | $CF_3$ | F | $NH_2$ |
| acyl | H | $CF_3$ | F | NH-cyclopropyl |
| acyl | H | $CF_3$ | F | NH-methyl |
| acyl | H | $CF_3$ | F | NH-ethyl |
| acyl | H | $CF_3$ | F | NH-acetyl |
| acyl | H | $CF_3$ | F | OH |
| acyl | H | $CF_3$ | F | OMe |
| acyl | H | $CF_3$ | F | OEt |
| acyl | H | $CF_3$ | F | O-cyclopropyl |
| acyl | H | $CF_3$ | F | O-acetyl |
| acyl | H | $CF_3$ | F | SH |
| acyl | H | $CF_3$ | F | SMe |
| acyl | H | $CF_3$ | F | SEt |
| acyl | H | $CF_3$ | F | S-cyclopropyl |
| acyl | H | $CF_3$ | F | F |
| acyl | H | $CF_3$ | F | Cl |
| acyl | H | $CF_3$ | F | Br |
| acyl | H | $CF_3$ | F | I |
| acyl | acyl | $CF_3$ | F | H |
| acyl | acyl | $CF_3$ | F | $NH_2$ |
| acyl | acyl | $CF_3$ | F | NH-cyclopropyl |
| acyl | acyl | $CF_3$ | F | NH-methyl |
| acyl | acyl | $CF_3$ | F | NH-ethyl |
| acyl | acyl | $CF_3$ | F | NH-acetyl |
| acyl | acyl | $CF_3$ | F | OH |
| acyl | acyl | $CF_3$ | F | OMe |
| acyl | acyl | $CF_3$ | F | OEt |
| acyl | acyl | $CF_3$ | F | O-cyclopropyl |
| acyl | acyl | $CF_3$ | F | O-acetyl |
| acyl | acyl | $CF_3$ | F | SH |
| acyl | acyl | $CF_3$ | F | SMe |
| acyl | acyl | $CF_3$ | F | SEt |
| acyl | acyl | $CF_3$ | F | S-cyclopropyl |
| acyl | acyl | $CF_3$ | F | F |
| acyl | acyl | $CF_3$ | F | Cl |
| acyl | acyl | $CF_3$ | F | Br |
| acyl | acyl | $CF_3$ | F | I |
| acyl | amino acid | $CF_3$ | F | H |
| acyl | amino acid | $CF_3$ | F | $NH_2$ |
| acyl | amino acid | $CF_3$ | F | NH-cyclopropyl |
| acyl | amino acid | $CF_3$ | F | NH-methyl |
| acyl | amino acid | $CF_3$ | F | NH-ethyl |
| acyl | amino acid | $CF_3$ | F | NH-acetyl |
| acyl | amino acid | $CF_3$ | F | OH |
| acyl | amino acid | $CF_3$ | F | OMe |
| acyl | amino acid | $CF_3$ | F | OEt |
| acyl | amino acid | $CF_3$ | F | O-cyclopropyl |
| acyl | amino acid | $CF_3$ | F | O-acetyl |
| acyl | amino acid | $CF_3$ | F | SH |
| acyl | amino acid | $CF_3$ | F | SMe |
| acyl | amino acid | $CF_3$ | F | SEt |
| acyl | amino acid | $CF_3$ | F | S-cyclopropyl |
| acyl | amino acid | $CF_3$ | F | F |
| acyl | amino acid | $CF_3$ | F | Cl |
| acyl | amino acid | $CF_3$ | F | Br |
| acyl | amino acid | $CF_3$ | F | I |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | $CF_3$ | F | H |
| H | acyl | $CF_3$ | F | $NH_2$ |
| H | acyl | $CF_3$ | F | NH-cyclopropyl |
| H | acyl | $CF_3$ | F | NH-methyl |
| H | acyl | $CF_3$ | F | NH-ethyl |
| H | acyl | $CF_3$ | F | NH-acetyl |
| H | acyl | $CF_3$ | F | OH |
| H | acyl | $CF_3$ | F | OMe |
| H | acyl | $CF_3$ | F | OEt |
| H | acyl | $CF_3$ | F | O-cyclopropyl |
| H | acyl | $CF_3$ | F | O-acetyl |
| H | acyl | $CF_3$ | F | SH |
| H | acyl | $CF_3$ | F | SMe |
| H | acyl | $CF_3$ | F | SEt |
| H | acyl | $CF_3$ | F | S-cyclopropyl |
| H | acyl | $CF_3$ | F | F |
| H | acyl | $CF_3$ | F | Cl |
| H | acyl | $CF_3$ | F | Br |
| H | acyl | $CF_3$ | F | I |
| H | amino acid | $CF_3$ | F | H |
| H | amino acid | $CF_3$ | F | $NH_2$ |
| H | amino acid | $CF_3$ | F | NH-cyclopropyl |
| H | amino acid | $CF_3$ | F | NH-methyl |
| H | amino acid | $CF_3$ | F | NH-ethyl |
| H | amino acid | $CF_3$ | F | NH-acetyl |
| H | amino acid | $CF_3$ | F | OH |
| H | amino acid | $CF_3$ | F | OMe |
| H | amino acid | $CF_3$ | F | OEt |
| H | amino acid | $CF_3$ | F | O-cyclopropyl |
| H | amino acid | $CF_3$ | F | O-acetyl |
| H | amino acid | $CF_3$ | F | SH |
| H | amino acid | $CF_3$ | F | SMe |
| H | amino acid | $CF_3$ | F | SEt |
| H | amino acid | $CF_3$ | F | S-cyclopropyl |
| H | amino acid | $CF_3$ | F | F |
| H | amino acid | $CF_3$ | F | Cl |
| H | amino acid | $CF_3$ | F | Br |
| H | amino acid | $CF_3$ | F | I |
| amino acid | amino acid | $CF_3$ | F | H |
| amino acid | amino acid | $CF_3$ | F | $NH_2$ |
| amino acid | amino acid | $CF_3$ | F | NH-cyclopropyl |
| amino acid | amino acid | $CF_3$ | F | NH-methyl |
| amino acid | amino acid | $CF_3$ | F | NH-ethyl |
| amino acid | amino acid | $CF_3$ | F | NH-acetyl |
| amino acid | amino acid | $CF_3$ | F | OH |
| amino acid | amino acid | $CF_3$ | F | OMe |
| amino acid | amino acid | $CF_3$ | F | OEt |
| amino acid | amino acid | $CF_3$ | F | O-cyclopropyl |
| amino acid | amino acid | $CF_3$ | F | O-acetyl |
| amino acid | amino acid | $CF_3$ | F | SH |
| amino acid | amino acid | $CF_3$ | F | SMe |
| amino acid | amino acid | $CF_3$ | F | SEt |
| amino acid | amino acid | $CF_3$ | F | S-cyclopropyl |
| amino acid | amino acid | $CF_3$ | F | F |
| amino acid | amino acid | $CF_3$ | F | Cl |
| amino acid | amino acid | $CF_3$ | F | Br |
| amino acid | amino acid | $CF_3$ | F | I |
| amino acid | H | $CF_3$ | F | H |
| amino acid | H | $CF_3$ | F | $NH_2$ |
| amino acid | H | $CF_3$ | F | NH-cyclopropyl |
| amino acid | H | $CF_3$ | F | NH-methyl |
| amino acid | H | $CF_3$ | F | NH-ethyl |
| amino acid | H | $CF_3$ | F | NH-acetyl |
| amino acid | H | $CF_3$ | F | OH |
| amino acid | H | $CF_3$ | F | OMe |
| amino acid | H | $CF_3$ | F | OEt |
| amino acid | H | $CF_3$ | F | O-cyclopropyl |
| amino acid | H | $CF_3$ | F | O-acetyl |
| amino acid | H | $CF_3$ | F | SH |
| amino acid | H | $CF_3$ | F | SMe |
| amino acid | H | $CF_3$ | F | SEt |
| amino acid | H | $CF_3$ | F | S-cyclopropyl |
| amino acid | H | $CF_3$ | F | F |
| amino acid | H | $CF_3$ | F | Cl |
| amino acid | H | $CF_3$ | F | Br |
| amino acid | H | $CF_3$ | F | I |
| amino acid | acyl | $CF_3$ | F | H |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | $CF_3$ | F | $NH_2$ |
| amino acid | acyl | $CF_3$ | F | NH-cyclopropyl |
| amino acid | acyl | $CF_3$ | F | NH-methyl |
| amino acid | acyl | $CF_3$ | F | NH-ethyl |
| amino acid | acyl | $CF_3$ | F | NH-acetyl |
| amino acid | acyl | $CF_3$ | F | OH |
| amino acid | acyl | $CF_3$ | F | OMe |
| amino acid | acyl | $CF_3$ | F | OEt |
| amino acid | acyl | $CF_3$ | F | O-cyclopropyl |
| amino acid | acyl | $CF_3$ | F | O-acetyl |
| amino acid | acyl | $CF_3$ | F | SH |
| amino acid | acyl | $CF_3$ | F | SMe |
| amino acid | acyl | $CF_3$ | F | SEt |
| amino acid | acyl | $CF_3$ | F | S-cyclopropyl |
| amino acid | acyl | $CF_3$ | F | F |
| amino acid | acyl | $CF_3$ | F | Cl |
| amino acid | acyl | $CF_3$ | F | Br |
| amino acid | acyl | $CF_3$ | F | I |
| acyl | H | Br | F | H |
| acyl | H | Br | F | $NH_2$ |
| acyl | H | Br | F | NH-cyclopropyl |
| acyl | H | Br | F | NH-methyl |
| acyl | H | Br | F | NH-ethyl |
| acyl | H | Br | F | NH-acetyl |
| acyl | H | Br | F | OH |
| acyl | H | Br | F | OMe |
| acyl | H | Br | F | OEt |
| acyl | H | Br | F | O-cyclopropyl |
| acyl | H | Br | F | O-acetyl |
| acyl | H | Br | F | SH |
| acyl | H | Br | F | SMe |
| acyl | H | Br | F | SEt |
| acyl | H | Br | F | S-cyclopropyl |
| acyl | H | Br | F | F |
| acyl | H | Br | F | Cl |
| acyl | H | Br | F | Br |
| acyl | H | Br | F | I |
| acyl | acyl | Br | F | H |
| acyl | acyl | Br | F | $NH_2$ |
| acyl | acyl | Br | F | NH-cyclopropyl |
| acyl | acyl | Br | F | NH-methyl |
| acyl | acyl | Br | F | NH-ethyl |
| acyl | acyl | Br | F | NH-acetyl |
| acyl | acyl | Br | F | OH |
| acyl | acyl | Br | F | OMe |
| acyl | acyl | Br | F | OEt |
| acyl | acyl | Br | F | O-cyclopropyl |
| acyl | acyl | Br | F | O-acetyl |
| acyl | acyl | Br | F | SH |
| acyl | acyl | Br | F | SMe |
| acyl | acyl | Br | F | SEt |
| acyl | acyl | Br | F | S-cyclopropyl |
| acyl | acyl | Br | F | F |
| acyl | acyl | Br | F | Cl |
| acyl | acyl | Br | F | Br |
| acyl | acyl | Br | F | I |
| acyl | amino acid | Br | F | H |
| acyl | amino acid | Br | F | $NH_2$ |
| acyl | amino acid | Br | F | NH-cyclopropyl |
| acyl | amino acid | Br | F | NH-methyl |
| acyl | amino acid | Br | F | NH-ethyl |
| acyl | amino acid | Br | F | NH-acetyl |
| acyl | amino acid | Br | F | OH |
| acyl | amino acid | Br | F | OMe |
| acyl | amino acid | Br | F | OEt |
| acyl | amino acid | Br | F | O-cyclopropyl |
| acyl | amino acid | Br | F | O-acetyl |
| acyl | amino acid | Br | F | SH |
| acyl | amino acid | Br | F | SMe |
| acyl | amino acid | Br | F | SEt |
| acyl | amino acid | Br | F | S-cyclopropyl |
| acyl | amino acid | Br | F | F |
| acyl | amino acid | Br | F | Cl |
| acyl | amino acid | Br | F | Br |
| acyl | amino acid | Br | F | I |
| H | acyl | Br | F | H |
| H | acyl | Br | F | $NH_2$ |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | Br | F | NH-cyclopropyl |
| H | acyl | Br | F | NH-methyl |
| H | acyl | Br | F | NH-ethyl |
| H | acyl | Br | F | NH-acetyl |
| H | acyl | Br | F | OH |
| H | acyl | Br | F | OMe |
| H | acyl | Br | F | OEt |
| H | acyl | Br | F | O-cyclopropyl |
| H | acyl | Br | F | O-acetyl |
| H | acyl | Br | F | SH |
| H | acyl | Br | F | SMe |
| H | acyl | Br | F | SEt |
| H | acyl | Br | F | S-cyclopropyl |
| H | acyl | Br | F | F |
| H | acyl | Br | F | Cl |
| H | acyl | Br | F | Br |
| H | acyl | Br | F | I |
| H | amino acid | Br | F | H |
| H | amino acid | Br | F | $NH_2$ |
| H | amino acid | Br | F | NH-cyclopropyl |
| H | amino acid | Br | F | NH-methyl |
| H | amino acid | Br | F | NH-ethyl |
| H | amino acid | Br | F | NH-acetyl |
| H | amino acid | Br | F | OH |
| H | amino acid | Br | F | OMe |
| H | amino acid | Br | F | OEt |
| H | amino acid | Br | F | O-cyclopropyl |
| H | amino acid | Br | F | O-acetyl |
| H | amino acid | Br | F | SH |
| H | amino acid | Br | F | SMe |
| H | amino acid | Br | F | SEt |
| H | amino acid | Br | F | S-cyclopropyl |
| H | amino acid | Br | F | F |
| H | amino acid | Br | F | Cl |
| H | amino acid | Br | F | Br |
| H | amino acid | Br | F | I |
| amino acid | amino acid | Br | F | H |
| amino acid | amino acid | Br | F | $NH_2$ |
| amino acid | amino acid | Br | F | NH-cyclopropyl |
| amino acid | amino acid | Br | F | NH-methyl |
| amino acid | amino acid | Br | F | NH-ethyl |
| amino acid | amino acid | Br | F | NH-acetyl |
| amino acid | amino acid | Br | F | OH |
| amino acid | amino acid | Br | F | OMe |
| amino acid | amino acid | Br | F | OEt |
| amino acid | amino acid | Br | F | O-cyclopropyl |
| amino acid | amino acid | Br | F | O-acetyl |
| amino acid | amino acid | Br | F | SH |
| amino acid | amino acid | Br | F | SMe |
| amino acid | amino acid | Br | F | SEt |
| amino acid | amino acid | Br | F | S-cyclopropyl |
| amino acid | amino acid | Br | F | F |
| amino acid | amino acid | Br | F | Cl |
| amino acid | amino acid | Br | F | Br |
| amino acid | amino acid | Br | F | I |
| amino acid | H | Br | F | H |
| amino acid | H | Br | F | $NH_2$ |
| amino acid | H | Br | F | NH-cyclopropyl |
| amino acid | H | Br | F | NH-methyl |
| amino acid | H | Br | F | NH-ethyl |
| amino acid | H | Br | F | NH-acetyl |
| amino acid | H | Br | F | OH |
| amino acid | H | Br | F | OMe |
| amino acid | H | Br | F | OEt |
| amino acid | H | Br | F | O-cyclopropyl |
| amino acid | H | Br | F | O-acetyl |
| amino acid | H | Br | F | SH |
| amino acid | H | Br | F | SMe |
| amino acid | H | Br | F | SEt |
| amino acid | H | Br | F | S-cyclopropyl |
| amino acid | H | Br | F | F |
| amino acid | H | Br | F | Cl |
| amino acid | H | Br | F | Br |
| amino acid | H | Br | F | I |
| amino acid | acyl | Br | F | H |
| amino acid | acyl | Br | F | $NH_2$ |
| amino acid | acyl | Br | F | NH-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | Br | F | NH-methyl |
| amino acid | acyl | Br | F | NH-ethyl |
| amino acid | acyl | Br | F | NH-acetyl |
| amino acid | acyl | Br | F | OH |
| amino acid | acyl | Br | F | OMe |
| amino acid | acyl | Br | F | OEt |
| amino acid | acyl | Br | F | O-cyclopropyl |
| amino acid | acyl | Br | F | O-acetyl |
| amino acid | acyl | Br | F | SH |
| amino acid | acyl | Br | F | SMe |
| amino acid | acyl | Br | F | SEt |
| amino acid | acyl | Br | F | S-cyclopropyl |
| amino acid | acyl | Br | F | F |
| amino acid | acyl | Br | F | Cl |
| amino acid | acyl | Br | F | Br |
| amino acid | acyl | Br | F | I |
| acyl | H | Cl | F | H |
| acyl | H | Cl | F | $NH_2$ |
| acyl | H | Cl | F | NH-cyclopropyl |
| acyl | H | Cl | F | NH-methyl |
| acyl | H | Cl | F | NH-ethyl |
| acyl | H | Cl | F | NH-acetyl |
| acyl | H | Cl | F | OH |
| acyl | H | Cl | F | OMe |
| acyl | H | Cl | F | OEt |
| acyl | H | Cl | F | O-cyclopropyl |
| acyl | H | Cl | F | O-acetyl |
| acyl | H | Cl | F | SH |
| acyl | H | Cl | F | SMe |
| acyl | H | Cl | F | SEt |
| acyl | H | Cl | F | S-cyclopropyl |
| acyl | H | Cl | F | F |
| acyl | H | Cl | F | Cl |
| acyl | H | Cl | F | Br |
| acyl | H | Cl | F | I |
| acyl | acyl | Cl | F | H |
| acyl | acyl | Cl | F | $NH_2$ |
| acyl | acyl | Cl | F | NH-cyclopropyl |
| acyl | acyl | Cl | F | NH-methyl |
| acyl | acyl | Cl | F | NH-ethyl |
| acyl | acyl | Cl | F | NH-acetyl |
| acyl | acyl | Cl | F | OH |
| acyl | acyl | Cl | F | OMe |
| acyl | acyl | Cl | F | OEt |
| acyl | acyl | Cl | F | O-cyclopropyl |
| acyl | acyl | Cl | F | O-acetyl |
| acyl | acyl | Cl | F | SH |
| acyl | acyl | Cl | F | SMe |
| acyl | acyl | Cl | F | SEt |
| acyl | acyl | Cl | F | S-cyclopropyl |
| acyl | acyl | Cl | F | F |
| acyl | acyl | Cl | F | Cl |
| acyl | acyl | Cl | F | Br |
| acyl | acyl | Cl | F | I |
| acyl | amino acid | Cl | F | H |
| acyl | amino acid | Cl | F | $NH_2$ |
| acyl | amino acid | Cl | F | NH-cyclopropyl |
| acyl | amino acid | Cl | F | NH-methyl |
| acyl | amino acid | Cl | F | NH-ethyl |
| acyl | amino acid | Cl | F | NH-acetyl |
| acyl | amino acid | Cl | F | OH |
| acyl | amino acid | Cl | F | OMe |
| acyl | amino acid | Cl | F | OEt |
| acyl | amino acid | Cl | F | O-cyclopropyl |
| acyl | amino acid | Cl | F | O-acetyl |
| acyl | amino acid | Cl | F | SH |
| acyl | amino acid | Cl | F | SMe |
| acyl | amino acid | Cl | F | SEt |
| acyl | amino acid | Cl | F | S-cyclopropyl |
| acyl | amino acid | Cl | F | F |
| acyl | amino acid | Cl | F | Cl |
| acyl | amino acid | Cl | F | Br |
| acyl | amino acid | Cl | F | I |
| H | acyl | Cl | F | H |
| H | acyl | Cl | F | $NH_2$ |
| H | acyl | Cl | F | NH-cyclopropyl |
| H | acyl | Cl | F | NH-methyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | Cl | F | NH-ethyl |
| H | acyl | Cl | F | NH-acetyl |
| H | acyl | Cl | F | OH |
| H | acyl | Cl | F | OMe |
| H | acyl | Cl | F | OEt |
| H | acyl | Cl | F | O-cyclopropyl |
| H | acyl | Cl | F | O-acetyl |
| H | acyl | Cl | F | SH |
| H | acyl | Cl | F | SMe |
| H | acyl | Cl | F | SEt |
| H | acyl | Cl | F | S-cyclopropyl |
| H | acyl | Cl | F | F |
| H | acyl | Cl | F | Cl |
| H | acyl | Cl | F | Br |
| H | acyl | Cl | F | I |
| H | amino acid | Cl | F | H |
| H | amino acid | Cl | F | $NH_2$ |
| H | amino acid | Cl | F | NH-cyclopropyl |
| H | amino acid | Cl | F | NH-methyl |
| H | amino acid | Cl | F | NH-ethyl |
| H | amino acid | Cl | F | NH-acetyl |
| H | amino acid | Cl | F | OH |
| H | amino acid | Cl | F | OMe |
| H | amino acid | Cl | F | OEt |
| H | amino acid | Cl | F | O-cyclopropyl |
| H | amino acid | Cl | F | O-acetyl |
| H | amino acid | Cl | F | SH |
| H | amino acid | Cl | F | SMe |
| H | amino acid | Cl | F | SEt |
| H | amino acid | Cl | F | S-cyclopropyl |
| H | amino acid | Cl | F | F |
| H | amino acid | Cl | F | Cl |
| H | amino acid | Cl | F | Br |
| H | amino acid | Cl | F | I |
| amino acid | amino acid | Cl | F | H |
| amino acid | amino acid | Cl | F | $NH_2$ |
| amino acid | amino acid | Cl | F | NH-cyclopropyl |
| amino acid | amino acid | Cl | F | NH-methyl |
| amino acid | amino acid | Cl | F | NH-ethyl |
| amino acid | amino acid | Cl | F | NH-acetyl |
| amino acid | amino acid | Cl | F | OH |
| amino acid | amino acid | Cl | F | OMe |
| amino acid | amino acid | Cl | F | OEt |
| amino acid | amino acid | Cl | F | O-cyclopropyl |
| amino acid | amino acid | Cl | F | O-acetyl |
| amino acid | amino acid | Cl | F | SH |
| amino acid | amino acid | Cl | F | SMe |
| amino acid | amino acid | Cl | F | SEt |
| amino acid | amino acid | Cl | F | S-cyclopropyl |
| amino acid | amino acid | Cl | F | F |
| amino acid | amino acid | Cl | F | Cl |
| amino acid | amino acid | Cl | F | Br |
| amino acid | amino acid | Cl | F | I |
| amino acid | H | Cl | F | H |
| amino acid | H | Cl | F | $NH_2$ |
| amino acid | H | Cl | F | NH-cyclopropyl |
| amino acid | H | Cl | F | NH-methyl |
| amino acid | H | Cl | F | NH-ethyl |
| amino acid | H | Cl | F | NH-acetyl |
| amino acid | H | Cl | F | OH |
| amino acid | H | Cl | F | OMe |
| amino acid | H | Cl | F | OEt |
| amino acid | H | Cl | F | O-cyclopropyl |
| amino acid | H | Cl | F | O-acetyl |
| amino acid | H | Cl | F | SH |
| amino acid | H | Cl | F | SMe |
| amino acid | H | Cl | F | SEt |
| amino acid | H | Cl | F | S-cyclopropyl |
| amino acid | H | Cl | F | F |
| amino acid | H | Cl | F | Cl |
| amino acid | H | Cl | F | Br |
| amino acid | H | Cl | F | I |
| amino acid | acyl | Cl | F | H |
| amino acid | acyl | Cl | F | $NH_2$ |
| amino acid | acyl | Cl | F | NH-cyclopropyl |
| amino acid | acyl | Cl | F | NH-methyl |
| amino acid | acyl | Cl | F | NH-ethyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | Cl | F | NH-acetyl |
| amino acid | acyl | Cl | F | OH |
| amino acid | acyl | Cl | F | OMe |
| amino acid | acyl | Cl | F | OEt |
| amino acid | acyl | Cl | F | O-cyclopropyl |
| amino acid | acyl | Cl | F | O-acetyl |
| amino acid | acyl | Cl | F | SH |
| amino acid | acyl | Cl | F | SMe |
| amino acid | acyl | Cl | F | SEt |
| amino acid | acyl | Cl | F | S-cyclopropyl |
| amino acid | acyl | Cl | F | F |
| amino acid | acyl | Cl | F | Cl |
| amino acid | acyl | Cl | F | Br |
| amino acid | acyl | Cl | F | I |
| acyl | H | F | F | H |
| acyl | H | F | F | $NH_2$ |
| acyl | H | F | F | NH-cyclopropyl |
| acyl | H | F | F | NH-methyl |
| acyl | H | F | F | NH-ethyl |
| acyl | H | F | F | NH-acetyl |
| acyl | H | F | F | OH |
| acyl | H | F | F | OMe |
| acyl | H | F | F | OEt |
| acyl | H | F | F | O-cyclopropyl |
| acyl | H | F | F | O-acetyl |
| acyl | H | F | F | SH |
| acyl | H | F | F | SMe |
| acyl | H | F | F | SEt |
| acyl | H | F | F | S-cyclopropyl |
| acyl | H | F | F | F |
| acyl | H | F | F | Cl |
| acyl | H | F | F | Br |
| acyl | H | F | F | I |
| acyl | acyl | F | F | H |
| acyl | acyl | F | F | $NH_2$ |
| acyl | acyl | F | F | NH-cyclopropyl |
| acyl | acyl | F | F | NH-methyl |
| acyl | acyl | F | F | NH-ethyl |
| acyl | acyl | F | F | NH-acetyl |
| acyl | acyl | F | F | OH |
| acyl | acyl | F | F | OMe |
| acyl | acyl | F | F | OEt |
| acyl | acyl | F | F | O-cyclopropyl |
| acyl | acyl | F | F | O-acetyl |
| acyl | acyl | F | F | SH |
| acyl | acyl | F | F | SMe |
| acyl | acyl | F | F | SEt |
| acyl | acyl | F | F | S-cyclopropyl |
| acyl | acyl | F | F | F |
| acyl | acyl | F | F | Cl |
| acyl | acyl | F | F | Br |
| acyl | acyl | F | F | I |
| acyl | amino acid | F | F | H |
| acyl | amino acid | F | F | $NH_2$ |
| acyl | amino acid | F | F | NH-cyclopropyl |
| acyl | amino acid | F | F | NH-methyl |
| acyl | amino acid | F | F | NH-ethyl |
| acyl | amino acid | F | F | NH-acetyl |
| acyl | amino acid | F | F | OH |
| acyl | amino acid | F | F | OMe |
| acyl | amino acid | F | F | OEt |
| acyl | amino acid | F | F | O-cyclopropyl |
| acyl | amino acid | F | F | O-acetyl |
| acyl | amino acid | F | F | SH |
| acyl | amino acid | F | F | SMe |
| acyl | amino acid | F | F | SEt |
| acyl | amino acid | F | F | S-cyclopropyl |
| acyl | amino acid | F | F | F |
| acyl | amino acid | F | F | Cl |
| acyl | amino acid | F | F | Br |
| acyl | amino acid | F | F | I |
| H | acyl | F | F | H |
| H | acyl | F | F | $NH_2$ |
| H | acyl | F | F | NH-cyclopropyl |
| H | acyl | F | F | NH-methyl |
| H | acyl | F | F | NH-ethyl |
| H | acyl | F | F | NH-acetyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | F | F | OH |
| H | acyl | F | F | OMe |
| H | acyl | F | F | OEt |
| H | acyl | F | F | O-cyclopropyl |
| H | acyl | F | F | O-acetyl |
| H | acyl | F | F | SH |
| H | acyl | F | F | SMe |
| H | acyl | F | F | SEt |
| H | acyl | F | F | S-cyclopropyl |
| H | acyl | F | F | F |
| H | acyl | F | F | Cl |
| H | acyl | F | F | Br |
| H | acyl | F | F | I |
| H | amino acid | F | F | H |
| H | amino acid | F | F | $NH_2$ |
| H | amino acid | F | F | NH-cyclopropyl |
| H | amino acid | F | F | NH-methyl |
| H | amino acid | F | F | NH-ethyl |
| H | amino acid | F | F | NH-acetyl |
| H | amino acid | F | F | OH |
| H | amino acid | F | F | OMe |
| H | amino acid | F | F | OEt |
| H | amino acid | F | F | O-cyclopropyl |
| H | amino acid | F | F | O-acetyl |
| H | amino acid | F | F | SH |
| H | amino acid | F | F | SMe |
| H | amino acid | F | F | SEt |
| H | amino acid | F | F | S-cyclopropyl |
| H | amino acid | F | F | F |
| H | amino acid | F | F | Cl |
| H | amino acid | F | F | Br |
| H | amino acid | F | F | I |
| amino acid | amino acid | F | F | H |
| amino acid | amino acid | F | F | $NH_2$ |
| amino acid | amino acid | F | F | NH-cyclopropyl |
| amino acid | amino acid | F | F | NH-methyl |
| amino acid | amino acid | F | F | NH-ethyl |
| amino acid | amino acid | F | F | NH-acetyl |
| amino acid | amino acid | F | F | OH |
| amino acid | amino acid | F | F | OMe |
| amino acid | amino acid | F | F | OEt |
| amino acid | amino acid | F | F | O-cyclopropyl |
| amino acid | amino acid | F | F | O-acetyl |
| amino acid | amino acid | F | F | SH |
| amino acid | amino acid | F | F | SMe |
| amino acid | amino acid | F | F | SEt |
| amino acid | amino acid | F | F | S-cyclopropyl |
| amino acid | amino acid | F | F | F |
| amino acid | amino acid | F | F | Cl |
| amino acid | amino acid | F | F | Br |
| amino acid | amino acid | F | F | I |
| amino acid | H | F | F | H |
| amino acid | H | F | F | $NH_2$ |
| amino acid | H | F | F | NH-cyclopropyl |
| amino acid | H | F | F | NH-methyl |
| amino acid | H | F | F | NH-ethyl |
| amino acid | H | F | F | NH-acetyl |
| amino acid | H | F | F | OH |
| amino acid | H | F | F | OMe |
| amino acid | H | F | F | OEt |
| amino acid | H | F | F | O-cyclopropyl |
| amino acid | H | F | F | O-acetyl |
| amino acid | H | F | F | SH |
| amino acid | H | F | F | SMe |
| amino acid | H | F | F | SEt |
| amino acid | H | F | F | S-cyclopropyl |
| amino acid | H | F | F | F |
| amino acid | H | F | F | Cl |
| amino acid | H | F | F | Br |
| amino acid | H | F | F | I |
| amino acid | acyl | F | F | H |
| amino acid | acyl | F | F | $NH_2$ |
| amino acid | acyl | F | F | NH-cyclopropyl |
| amino acid | acyl | F | F | NH-methyl |
| amino acid | acyl | F | F | NH-ethyl |
| amino acid | acyl | F | F | NH-acetyl |
| amino acid | acyl | F | F | OH |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | F | F | OMe |
| amino acid | acyl | F | F | OEt |
| amino acid | acyl | F | F | O-cyclopropyl |
| amino acid | acyl | F | F | O-acetyl |
| amino acid | acyl | F | F | SH |
| amino acid | acyl | F | F | SMe |
| amino acid | acyl | F | F | SEt |
| amino acid | acyl | F | F | S-cyclopropyl |
| amino acid | acyl | F | F | F |
| amino acid | acyl | F | F | Cl |
| amino acid | acyl | F | F | Br |
| amino acid | acyl | F | F | I |
| acyl | H | $NH_2$ | F | H |
| acyl | H | $NH_2$ | F | $NH_2$ |
| acyl | H | $NH_2$ | F | NH-cyclopropyl |
| acyl | H | $NH_2$ | F | NH-methyl |
| acyl | H | $NH_2$ | F | NH-ethyl |
| acyl | H | $NH_2$ | F | NH-acetyl |
| acyl | H | $NH_2$ | F | OH |
| acyl | H | $NH_2$ | F | OMe |
| acyl | H | $NH_2$ | F | OEt |
| acyl | H | $NH_2$ | F | O-cyclopropyl |
| acyl | H | $NH_2$ | F | O-acetyl |
| acyl | H | $NH_2$ | F | SH |
| acyl | H | $NH_2$ | F | SMe |
| acyl | H | $NH_2$ | F | SEt |
| acyl | H | $NH_2$ | F | S-cyclopropyl |
| acyl | H | $NH_2$ | F | F |
| acyl | H | $NH_2$ | F | Cl |
| acyl | H | $NH_2$ | F | Br |
| acyl | H | $NH_2$ | F | I |
| acyl | acyl | $NH_2$ | F | H |
| acyl | acyl | $NH_2$ | F | $NH_2$ |
| acyl | acyl | $NH_2$ | F | NH-cyclopropyl |
| acyl | acyl | $NH_2$ | F | NH-methyl |
| acyl | acyl | $NH_2$ | F | NH-ethyl |
| acyl | acyl | $NH_2$ | F | NH-acetyl |
| acyl | acyl | $NH_2$ | F | OH |
| acyl | acyl | $NH_2$ | F | OMe |
| acyl | acyl | $NH_2$ | F | OEt |
| acyl | acyl | $NH_2$ | F | O-cyclopropyl |
| acyl | acyl | $NH_2$ | F | O-acetyl |
| acyl | acyl | $NH_2$ | F | SH |
| acyl | acyl | $NH_2$ | F | SMe |
| acyl | acyl | $NH_2$ | F | SEt |
| acyl | acyl | $NH_2$ | F | S-cyclopropyl |
| acyl | acyl | $NH_2$ | F | F |
| acyl | acyl | $NH_2$ | F | Cl |
| acyl | acyl | $NH_2$ | F | Br |
| acyl | acyl | $NH_2$ | F | I |
| acyl | amino acid | $NH_2$ | F | H |
| acyl | amino acid | $NH_2$ | F | $NH_2$ |
| acyl | amino acid | $NH_2$ | F | NH-cyclopropyl |
| acyl | amino acid | $NH_2$ | F | NH-methyl |
| acyl | amino acid | $NH_2$ | F | NH-ethyl |
| acyl | amino acid | $NH_2$ | F | NH-acetyl |
| acyl | amino acid | $NH_2$ | F | OH |
| acyl | amino acid | $NH_2$ | F | OMe |
| acyl | amino acid | $NH_2$ | F | OEt |
| acyl | amino acid | $NH_2$ | F | O-cyclopropyl |
| acyl | amino acid | $NH_2$ | F | O-acetyl |
| acyl | amino acid | $NH_2$ | F | SH |
| acyl | amino acid | $NH_2$ | F | SMe |
| acyl | amino acid | $NH_2$ | F | SEt |
| acyl | amino acid | $NH_2$ | F | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | F | F |
| acyl | amino acid | $NH_2$ | F | Cl |
| acyl | amino acid | $NH_2$ | F | Br |
| acyl | amino acid | $NH_2$ | F | I |
| H | acyl | $NH_2$ | F | H |
| H | acyl | $NH_2$ | F | $NH_2$ |
| H | acyl | $NH_2$ | F | NH-cyclopropyl |
| H | acyl | $NH_2$ | F | NH-methyl |
| H | acyl | $NH_2$ | F | NH-ethyl |
| H | acyl | $NH_2$ | F | NH-acetyl |
| H | acyl | $NH_2$ | F | OH |
| H | acyl | $NH_2$ | F | OMe |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | $NH_2$ | F | OEt |
| H | acyl | $NH_2$ | F | O-cyclopropyl |
| H | acyl | $NH_2$ | F | O-acetyl |
| H | acyl | $NH_2$ | F | SH |
| H | acyl | $NH_2$ | F | SMe |
| H | acyl | $NH_2$ | F | SEt |
| H | acyl | $NH_2$ | F | S-cyclopropyl |
| H | acyl | $NH_2$ | F | F |
| H | acyl | $NH_2$ | F | Cl |
| H | acyl | $NH_2$ | F | Br |
| H | acyl | $NH_2$ | F | I |
| H | amino acid | $NH_2$ | F | H |
| H | amino acid | $NH_2$ | F | $NH_2$ |
| H | amino acid | $NH_2$ | F | NH-cyclopropyl |
| H | amino acid | $NH_2$ | F | NH-methyl |
| H | amino acid | $NH_2$ | F | NH-ethyl |
| H | amino acid | $NH_2$ | F | NH-acetyl |
| H | amino acid | $NH_2$ | F | OH |
| H | amino acid | $NH_2$ | F | OMe |
| H | amino acid | $NH_2$ | F | OEt |
| H | amino acid | $NH_2$ | F | O-cyclopropyl |
| H | amino acid | $NH_2$ | F | O-acetyl |
| H | amino acid | $NH_2$ | F | SH |
| H | amino acid | $NH_2$ | F | SMe |
| H | amino acid | $NH_2$ | F | SEt |
| H | amino acid | $NH_2$ | F | S-cyclopropyl |
| H | amino acid | $NH_2$ | F | F |
| H | amino acid | $NH_2$ | F | Cl |
| H | amino acid | $NH_2$ | F | Br |
| H | amino acid | $NH_2$ | F | I |
| amino acid | amino acid | $NH_2$ | F | H |
| amino acid | amino acid | $NH_2$ | F | $NH_2$ |
| amino acid | amino acid | $NH_2$ | F | NH-cyclopropyl |
| amino acid | amino acid | $NH_2$ | F | NH-methyl |
| amino acid | amino acid | $NH_2$ | F | NH-ethyl |
| amino acid | amino acid | $NH_2$ | F | NH-acetyl |
| amino acid | amino acid | $NH_2$ | F | OH |
| amino acid | amino acid | $NH_2$ | F | OMe |
| amino acid | amino acid | $NH_2$ | F | OEt |
| amino acid | amino acid | $NH_2$ | F | O-cyclopropyl |
| amino acid | amino acid | $NH_2$ | F | O-acetyl |
| amino acid | amino acid | $NH_2$ | F | SH |
| amino acid | amino acid | $NH_2$ | F | SMe |
| amino acid | amino acid | $NH_2$ | F | SEt |
| amino acid | amino acid | $NH_2$ | F | S-cyclopropyl |
| amino acid | amino acid | $NH_2$ | F | F |
| amino acid | amino acid | $NH_2$ | F | Cl |
| amino acid | amino acid | $NH_2$ | F | Br |
| amino acid | amino acid | $NH_2$ | F | I |
| amino acid | H | $NH_2$ | F | H |
| amino acid | H | $NH_2$ | F | $NH_2$ |
| amino acid | H | $NH_2$ | F | NH-cyclopropyl |
| amino acid | H | $NH_2$ | F | NH-methyl |
| amino acid | H | $NH_2$ | F | NH-ethyl |
| amino acid | H | $NH_2$ | F | NH-acetyl |
| amino acid | H | $NH_2$ | F | OH |
| amino acid | H | $NH_2$ | F | OMe |
| amino acid | H | $NH_2$ | F | OEt |
| amino acid | H | $NH_2$ | F | O-cyclopropyl |
| amino acid | H | $NH_2$ | F | O-acetyl |
| amino acid | H | $NH_2$ | F | SH |
| amino acid | H | $NH_2$ | F | SMe |
| amino acid | H | $NH_2$ | F | SEt |
| amino acid | H | $NH_2$ | F | S-cyclopropyl |
| amino acid | H | $NH_2$ | F | F |
| amino acid | H | $NH_2$ | F | Cl |
| amino acid | H | $NH_2$ | F | Br |
| amino acid | H | $NH_2$ | F | I |
| amino acid | acyl | $NH_2$ | F | H |
| amino acid | acyl | $NH_2$ | F | $NH_2$ |
| amino acid | acyl | $NH_2$ | F | NH-cyclopropyl |
| amino acid | acyl | $NH_2$ | F | NH-methyl |
| amino acid | acyl | $NH_2$ | F | NH-ethyl |
| amino acid | acyl | $NH_2$ | F | NH-acetyl |
| amino acid | acyl | $NH_2$ | F | OH |
| amino acid | acyl | $NH_2$ | F | OMe |
| amino acid | acyl | $NH_2$ | F | OEt |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | $NH_2$ | F | O-cyclopropyl |
| amino acid | acyl | $NH_2$ | F | O-acetyl |
| amino acid | acyl | $NH_2$ | F | SH |
| amino acid | acyl | $NH_2$ | F | SMe |
| amino acid | acyl | $NH_2$ | F | SEt |
| amino acid | acyl | $NH_2$ | F | S-cyclopropyl |
| amino acid | acyl | $NH_2$ | F | F |
| amino acid | acyl | $NH_2$ | F | Cl |
| amino acid | acyl | $NH_2$ | F | Br |
| amino acid | acyl | $NH_2$ | F | I |
| acyl | H | SH | F | H |
| acyl | H | SH | F | $NH_2$ |
| acyl | H | SH | F | NH-cyclopropyl |
| acyl | H | SH | F | NH-methyl |
| acyl | H | SH | F | NH-ethyl |
| acyl | H | SH | F | NH-acetyl |
| acyl | H | SH | F | OH |
| acyl | H | SH | F | OMe |
| acyl | H | SH | F | OEt |
| acyl | H | SH | F | O-cyclopropyl |
| acyl | H | SH | F | O-acetyl |
| acyl | H | SH | F | SH |
| acyl | H | SH | F | SMe |
| acyl | H | SH | F | SEt |
| acyl | H | SH | F | S-cyclopropyl |
| acyl | H | SH | F | F |
| acyl | H | SH | F | Cl |
| acyl | H | SH | F | Br |
| acyl | H | SH | F | I |
| acyl | acyl | SH | F | H |
| acyl | acyl | SH | F | $NH_2$ |
| acyl | acyl | SH | F | NH-cyclopropyl |
| acyl | acyl | SH | F | NH-methyl |
| acyl | acyl | SH | F | NH-ethyl |
| acyl | acyl | SH | F | NH-acetyl |
| acyl | acyl | SH | F | OH |
| acyl | acyl | SH | F | OMe |
| acyl | acyl | SH | F | OEt |
| acyl | acyl | SH | F | O-cyclopropyl |
| acyl | acyl | SH | F | O-acetyl |
| acyl | acyl | SH | F | SH |
| acyl | acyl | SH | F | SMe |
| acyl | acyl | SH | F | SEt |
| acyl | acyl | SH | F | S-cyclopropyl |
| acyl | acyl | SH | F | F |
| acyl | acyl | SH | F | Cl |
| acyl | acyl | SH | F | Br |
| acyl | acyl | SH | F | I |
| acyl | amino acid | SH | F | H |
| acyl | amino acid | SH | F | $NH_2$ |
| acyl | amino acid | SH | F | NH-cyclopropyl |
| acyl | amino acid | SH | F | NH-methyl |
| acyl | amino acid | SH | F | NH-ethyl |
| acyl | amino acid | SH | F | NH-acetyl |
| acyl | amino acid | SH | F | OH |
| acyl | amino acid | SH | F | OMe |
| acyl | amino acid | SH | F | OEt |
| acyl | amino acid | SH | F | O-cyclopropyl |
| acyl | amino acid | SH | F | O-acetyl |
| acyl | amino acid | SH | F | SH |
| acyl | amino acid | SH | F | SMe |
| acyl | amino acid | SH | F | SEt |
| acyl | amino acid | SH | F | S-cyclopropyl |
| acyl | amino acid | SH | F | F |
| acyl | amino acid | SH | F | Cl |
| acyl | amino acid | SH | F | Br |
| acyl | amino acid | SH | F | I |
| H | acyl | SH | F | H |
| H | acyl | SH | F | $NH_2$ |
| H | acyl | SH | F | NH-cyclopropyl |
| H | acyl | SH | F | NH-methyl |
| H | acyl | SH | F | NH-ethyl |
| H | acyl | SH | F | NH-acetyl |
| H | acyl | SH | F | OH |
| H | acyl | SH | F | OMe |
| H | acyl | SH | F | OEt |
| H | acyl | SH | F | O-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | SH | F | O-acetyl |
| H | acyl | SH | F | SH |
| H | acyl | SH | F | SMe |
| H | acyl | SH | F | SEt |
| H | acyl | SH | F | S-cyclopropyl |
| H | acyl | SH | F | F |
| H | acyl | SH | F | Cl |
| H | acyl | SH | F | Br |
| H | acyl | SH | F | I |
| H | amino acid | SH | F | H |
| H | amino acid | SH | F | $NH_2$ |
| H | amino acid | SH | F | NH-cyclopropyl |
| H | amino acid | SH | F | NH-methyl |
| H | amino acid | SH | F | NH-ethyl |
| H | amino acid | SH | F | NH-acetyl |
| H | amino acid | SH | F | OH |
| H | amino acid | SH | F | OMe |
| H | amino acid | SH | F | OEt |
| H | amino acid | SH | F | O-cyclopropyl |
| H | amino acid | SH | F | O-acetyl |
| H | amino acid | SH | F | SH |
| H | amino acid | SH | F | SMe |
| H | amino acid | SH | F | SEt |
| H | amino acid | SH | F | S-cyclopropyl |
| H | amino acid | SH | F | F |
| H | amino acid | SH | F | Cl |
| H | amino acid | SH | F | Br |
| H | amino acid | SH | F | I |
| amino acid | amino acid | SH | F | H |
| amino acid | amino acid | SH | F | $NH_2$ |
| amino acid | amino acid | SH | F | NH-cyclopropyl |
| amino acid | amino acid | SH | F | NH-methyl |
| amino acid | amino acid | SH | F | NH-ethyl |
| amino acid | amino acid | SH | F | NH-acetyl |
| amino acid | amino acid | SH | F | OH |
| amino acid | amino acid | SH | F | OMe |
| amino acid | amino acid | SH | F | OEt |
| amino acid | amino acid | SH | F | O-cyclopropyl |
| amino acid | amino acid | SH | F | O-acetyl |
| amino acid | amino acid | SH | F | SH |
| amino acid | amino acid | SH | F | SMe |
| amino acid | amino acid | SH | F | SEt |
| amino acid | amino acid | SH | F | S-cyclopropyl |
| amino acid | amino acid | SH | F | F |
| amino acid | amino acid | SH | F | Cl |
| amino acid | amino acid | SH | F | Br |
| amino acid | amino acid | SH | F | I |
| amino acid | H | SH | F | H |
| amino acid | H | SH | F | $NH_2$ |
| amino acid | H | SH | F | NH-cyclopropyl |
| amino acid | H | SH | F | NH-methyl |
| amino acid | H | SH | F | NH-ethyl |
| amino acid | H | SH | F | NH-acetyl |
| amino acid | H | SH | F | OH |
| amino acid | H | SH | F | OMe |
| amino acid | H | SH | F | OEt |
| amino acid | H | SH | F | O-cyclopropyl |
| amino acid | H | SH | F | O-acetyl |
| amino acid | H | SH | F | SH |
| amino acid | H | SH | F | SMe |
| amino acid | H | SH | F | SEt |
| amino acid | H | SH | F | S-cyclopropyl |
| amino acid | H | SH | F | F |
| amino acid | H | SH | F | Cl |
| amino acid | H | SH | F | Br |
| amino acid | H | SH | F | I |
| amino acid | acyl | SH | F | H |
| amino acid | acyl | SH | F | $NH_2$ |
| amino acid | acyl | SH | F | NH-cyclopropyl |
| amino acid | acyl | SH | F | NH-methyl |
| amino acid | acyl | SH | F | NH-ethyl |
| amino acid | acyl | SH | F | NH-acetyl |
| amino acid | acyl | SH | F | OH |
| amino acid | acyl | SH | F | OMe |
| amino acid | acyl | SH | F | OEt |
| amino acid | acyl | SH | F | O-cyclopropyl |
| amino acid | acyl | SH | F | O-acetyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | SH | F | SH |
| amino acid | acyl | SH | F | SMe |
| amino acid | acyl | SH | F | SEt |
| amino acid | acyl | SH | F | S-cyclopropyl |
| amino acid | acyl | SH | F | F |
| amino acid | acyl | SH | F | Cl |
| amino acid | acyl | SH | F | Br |
| amino acid | acyl | SH | F | I |
| acyl | H | OH | F | H |
| acyl | H | OH | F | $NH_2$ |
| acyl | H | OH | F | NH-cyclopropyl |
| acyl | H | OH | F | NH-methyl |
| acyl | H | OH | F | NH-ethyl |
| acyl | H | OH | F | NH-acetyl |
| acyl | H | OH | F | OH |
| acyl | H | OH | F | OMe |
| acyl | H | OH | F | OEt |
| acyl | H | OH | F | O-cyclopropyl |
| acyl | H | OH | F | O-acetyl |
| acyl | H | OH | F | SH |
| acyl | H | OH | F | SMe |
| acyl | H | OH | F | SEt |
| acyl | H | OH | F | S-cyclopropyl |
| acyl | H | OH | F | F |
| acyl | H | OH | F | Cl |
| acyl | H | OH | F | Br |
| acyl | H | OH | F | I |
| acyl | acyl | OH | F | H |
| acyl | acyl | OH | F | $NH_2$ |
| acyl | acyl | OH | F | NH-cyclopropyl |
| acyl | acyl | OH | F | NH-methyl |
| acyl | acyl | OH | F | NH-ethyl |
| acyl | acyl | OH | F | NH-acetyl |
| acyl | acyl | OH | F | OH |
| acyl | acyl | OH | F | OMe |
| acyl | acyl | OH | F | OEt |
| acyl | acyl | OH | F | O-cyclopropyl |
| acyl | acyl | OH | F | O-acetyl |
| acyl | acyl | OH | F | SH |
| acyl | acyl | OH | F | SMe |
| acyl | acyl | OH | F | SEt |
| acyl | acyl | OH | F | S-cyclopropyl |
| acyl | acyl | OH | F | F |
| acyl | acyl | OH | F | Cl |
| acyl | acyl | OH | F | Br |
| acyl | acyl | OH | F | I |
| acyl | amino acid | OH | F | H |
| acyl | amino acid | OH | F | $NH_2$ |
| acyl | amino acid | OH | F | NH-cyclopropyl |
| acyl | amino acid | OH | F | NH-methyl |
| acyl | amino acid | OH | F | NH-ethyl |
| acyl | amino acid | OH | F | NH-acetyl |
| acyl | amino acid | OH | F | OH |
| acyl | amino acid | OH | F | OMe |
| acyl | amino acid | OH | F | OEt |
| acyl | amino acid | OH | F | O-cyclopropyl |
| acyl | amino acid | OH | F | O-acetyl |
| acyl | amino acid | OH | F | SH |
| acyl | amino acid | OH | F | SMe |
| acyl | amino acid | OH | F | SEt |
| acyl | amino acid | OH | F | S-cyclopropyl |
| acyl | amino acid | OH | F | F |
| acyl | amino acid | OH | F | Cl |
| acyl | amino acid | OH | F | Br |
| acyl | amino acid | OH | F | I |
| H | acyl | OH | F | H |
| H | acyl | OH | F | $NH_2$ |
| H | acyl | OH | F | NH-cyclopropyl |
| H | acyl | OH | F | NH-methyl |
| H | acyl | OH | F | NH-ethyl |
| H | acyl | OH | F | NH-acetyl |
| H | acyl | OH | F | OH |
| H | acyl | OH | F | OMe |
| H | acyl | OH | F | OEt |
| H | acyl | OH | F | O-cyclopropyl |
| H | acyl | OH | F | O-acetyl |
| H | acyl | OH | F | SH |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | OH | F | SMe |
| H | acyl | OH | F | SEt |
| H | acyl | OH | F | S-cyclopropyl |
| H | acyl | OH | F | F |
| H | acyl | OH | F | Cl |
| H | acyl | OH | F | Br |
| H | acyl | OH | F | I |
| H | amino acid | OH | F | H |
| H | amino acid | OH | F | $NH_2$ |
| H | amino acid | OH | F | NH-cyclopropyl |
| H | amino acid | OH | F | NH-methyl |
| H | amino acid | OH | F | NH-ethyl |
| H | amino acid | OH | F | NH-acetyl |
| H | amino acid | OH | F | OH |
| H | amino acid | OH | F | OMe |
| H | amino acid | OH | F | OEt |
| H | amino acid | OH | F | O-cyclopropyl |
| H | amino acid | OH | F | O-acetyl |
| H | amino acid | OH | F | SH |
| H | amino acid | OH | F | SMe |
| H | amino acid | OH | F | SEt |
| H | amino acid | OH | F | S-cyclopropyl |
| H | amino acid | OH | F | F |
| H | amino acid | OH | F | Cl |
| H | amino acid | OH | F | Br |
| H | amino acid | OH | F | I |
| amino acid | amino acid | OH | F | H |
| amino acid | amino acid | OH | F | $NH_2$ |
| amino acid | amino acid | OH | F | NH-cyclopropyl |
| amino acid | amino acid | OH | F | NH-methyl |
| amino acid | amino acid | OH | F | NH-ethyl |
| amino acid | amino acid | OH | F | NH-acetyl |
| amino acid | amino acid | OH | F | OH |
| amino acid | amino acid | OH | F | OMe |
| amino acid | amino acid | OH | F | OEt |
| amino acid | amino acid | OH | F | O-cyclopropyl |
| amino acid | amino acid | OH | F | O-acetyl |
| amino acid | amino acid | OH | F | SH |
| amino acid | amino acid | OH | F | SMe |
| amino acid | amino acid | OH | F | SEt |
| amino acid | amino acid | OH | F | S-cyclopropyl |
| amino acid | amino acid | OH | F | F |
| amino acid | amino acid | OH | F | Cl |
| amino acid | amino acid | OH | F | Br |
| amino acid | amino acid | OH | F | I |
| amino acid | H | OH | F | H |
| amino acid | H | OH | F | $NH_2$ |
| amino acid | H | OH | F | NH-cyclopropyl |
| amino acid | H | OH | F | NH-methyl |
| amino acid | H | OH | F | NH-ethyl |
| amino acid | H | OH | F | NH-acetyl |
| amino acid | H | OH | F | OH |
| amino acid | H | OH | F | OMe |
| amino acid | H | OH | F | OEt |
| amino acid | H | OH | F | O-cyclopropyl |
| amino acid | H | OH | F | O-acetyl |
| amino acid | H | OH | F | SH |
| amino acid | H | OH | F | SMe |
| amino acid | H | OH | F | SEt |
| amino acid | H | OH | F | S-cyclopropyl |
| amino acid | H | OH | F | F |
| amino acid | H | OH | F | Cl |
| amino acid | H | OH | F | Br |
| amino acid | H | OH | F | I |
| amino acid | acyl | OH | F | H |
| amino acid | acyl | OH | F | $NH_2$ |
| amino acid | acyl | OH | F | NH-cyclopropyl |
| amino acid | acyl | OH | F | NH-methyl |
| amino acid | acyl | OH | F | NH-ethyl |
| amino acid | acyl | OH | F | NH-acetyl |
| amino acid | acyl | OH | F | OH |
| amino acid | acyl | OH | F | OMe |
| amino acid | acyl | OH | F | OEt |
| amino acid | acyl | OH | F | O-cyclopropyl |
| amino acid | acyl | OH | F | O-acetyl |
| amino acid | acyl | OH | F | SH |
| amino acid | acyl | OH | F | SMe |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | OH | F | SEt |
| amino acid | acyl | OH | F | S-cyclopropyl |
| amino acid | acyl | OH | F | F |
| amino acid | acyl | OH | F | Cl |
| amino acid | acyl | OH | F | Br |
| amino acid | acyl | OH | F | I |
| acyl | H | $CH_3$ | $NH_2$ | H |
| acyl | H | $CH_3$ | $NH_2$ | $NH_2$ |
| acyl | H | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| acyl | H | $CH_3$ | $NH_2$ | NH-methyl |
| acyl | H | $CH_3$ | $NH_2$ | NH-ethyl |
| acyl | H | $CH_3$ | $NH_2$ | NH-acetyl |
| acyl | H | $CH_3$ | $NH_2$ | OH |
| acyl | H | $CH_3$ | $NH_2$ | OMe |
| acyl | H | $CH_3$ | $NH_2$ | OEt |
| acyl | H | $CH_3$ | $NH_2$ | O-cyclopropyl |
| acyl | H | $CH_3$ | $NH_2$ | O-acetyl |
| acyl | H | $CH_3$ | $NH_2$ | SH |
| acyl | H | $CH_3$ | $NH_2$ | SMe |
| acyl | H | $CH_3$ | $NH_2$ | SEt |
| acyl | H | $CH_3$ | $NH_2$ | S-cyclopropyl |
| acyl | H | $CH_3$ | $NH_2$ | F |
| acyl | H | $CH_3$ | $NH_2$ | Cl |
| acyl | H | $CH_3$ | $NH_2$ | Br |
| acyl | H | $CH_3$ | $NH_2$ | I |
| acyl | acyl | $CH_3$ | $NH_2$ | H |
| acyl | acyl | $CH_3$ | $NH_2$ | $NH_2$ |
| acyl | acyl | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | $CH_3$ | $NH_2$ | NH-methyl |
| acyl | acyl | $CH_3$ | $NH_2$ | NH-ethyl |
| acyl | acyl | $CH_3$ | $NH_2$ | NH-acetyl |
| acyl | acyl | $CH_3$ | $NH_2$ | OH |
| acyl | acyl | $CH_3$ | $NH_2$ | OMe |
| acyl | acyl | $CH_3$ | $NH_2$ | OEt |
| acyl | acyl | $CH_3$ | $NH_2$ | O-cyclopropyl |
| acyl | acyl | $CH_3$ | $NH_2$ | O-acetyl |
| acyl | acyl | $CH_3$ | $NH_2$ | SH |
| acyl | acyl | $CH_3$ | $NH_2$ | SMe |
| acyl | acyl | $CH_3$ | $NH_2$ | SEt |
| acyl | acyl | $CH_3$ | $NH_2$ | S-cyclopropyl |
| acyl | acyl | $CH_3$ | $NH_2$ | F |
| acyl | acyl | $CH_3$ | $NH_2$ | Cl |
| acyl | acyl | $CH_3$ | $NH_2$ | Br |
| acyl | acyl | $CH_3$ | $NH_2$ | I |
| acyl | amino acid | $CH_3$ | $NH_2$ | H |
| acyl | amino acid | $CH_3$ | $NH_2$ | $NH_2$ |
| acyl | amino acid | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | $CH_3$ | $NH_2$ | NH-methyl |
| acyl | amino acid | $CH_3$ | $NH_2$ | NH-ethyl |
| acyl | amino acid | $CH_3$ | $NH_2$ | NH-acetyl |
| acyl | amino acid | $CH_3$ | $NH_2$ | OH |
| acyl | amino acid | $CH_3$ | $NH_2$ | OMe |
| acyl | amino acid | $CH_3$ | $NH_2$ | OEt |
| acyl | amino acid | $CH_3$ | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | $CH_3$ | $NH_2$ | O-acetyl |
| acyl | amino acid | $CH_3$ | $NH_2$ | SH |
| acyl | amino acid | $CH_3$ | $NH_2$ | SMe |
| acyl | amino acid | $CH_3$ | $NH_2$ | SEt |
| acyl | amino acid | $CH_3$ | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | $CH_3$ | $NH_2$ | F |
| acyl | amino acid | $CH_3$ | $NH_2$ | Cl |
| acyl | amino acid | $CH_3$ | $NH_2$ | Br |
| acyl | amino acid | $CH_3$ | $NH_2$ | I |
| H | acyl | $CH_3$ | $NH_2$ | H |
| H | acyl | $CH_3$ | $NH_2$ | $NH_2$ |
| H | acyl | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| H | acyl | $CH_3$ | $NH_2$ | NH-methyl |
| H | acyl | $CH_3$ | $NH_2$ | NH-ethyl |
| H | acyl | $CH_3$ | $NH_2$ | NH-acetyl |
| H | acyl | $CH_3$ | $NH_2$ | OH |
| H | acyl | $CH_3$ | $NH_2$ | OMe |
| H | acyl | $CH_3$ | $NH_2$ | OEt |
| H | acyl | $CH_3$ | $NH_2$ | O-cyclopropyl |
| H | acyl | $CH_3$ | $NH_2$ | O-acetyl |
| H | acyl | $CH_3$ | $NH_2$ | SH |
| H | acyl | $CH_3$ | $NH_2$ | SMe |
| H | acyl | $CH_3$ | $NH_2$ | SEt |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | $CH_3$ | $NH_2$ | S-cyclopropyl |
| H | acyl | $CH_3$ | $NH_2$ | F |
| H | acyl | $CH_3$ | $NH_2$ | Cl |
| H | acyl | $CH_3$ | $NH_2$ | Br |
| H | acyl | $CH_3$ | $NH_2$ | I |
| H | amino acid | $CH_3$ | $NH_2$ | H |
| H | amino acid | $CH_3$ | $NH_2$ | $NH_2$ |
| H | amino acid | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| H | amino acid | $CH_3$ | $NH_2$ | NH-methyl |
| H | amino acid | $CH_3$ | $NH_2$ | NH-ethyl |
| H | amino acid | $CH_3$ | $NH_2$ | NH-acetyl |
| H | amino acid | $CH_3$ | $NH_2$ | OH |
| H | amino acid | $CH_3$ | $NH_2$ | OMe |
| H | amino acid | $CH_3$ | $NH_2$ | OEt |
| H | amino acid | $CH_3$ | $NH_2$ | O-cyclopropyl |
| H | amino acid | $CH_3$ | $NH_2$ | O-acetyl |
| H | amino acid | $CH_3$ | $NH_2$ | SH |
| H | amino acid | $CH_3$ | $NH_2$ | SMe |
| H | amino acid | $CH_3$ | $NH_2$ | SEt |
| H | amino acid | $CH_3$ | $NH_2$ | S-cyclopropyl |
| H | amino acid | $CH_3$ | $NH_2$ | F |
| H | amino acid | $CH_3$ | $NH_2$ | Cl |
| H | amino acid | $CH_3$ | $NH_2$ | Br |
| H | amino acid | $CH_3$ | $NH_2$ | I |
| amino acid | amino acid | $CH_3$ | $NH_2$ | H |
| amino acid | amino acid | $CH_3$ | $NH_2$ | $NH_2$ |
| amino acid | amino acid | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | NH-methyl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | NH-ethyl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | NH-acetyl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | OH |
| amino acid | amino acid | $CH_3$ | $NH_2$ | OMe |
| amino acid | amino acid | $CH_3$ | $NH_2$ | OEt |
| amino acid | amino acid | $CH_3$ | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | O-acetyl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | SH |
| amino acid | amino acid | $CH_3$ | $NH_2$ | SMe |
| amino acid | amino acid | $CH_3$ | $NH_2$ | SEt |
| amino acid | amino acid | $CH_3$ | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | F |
| amino acid | amino acid | $CH_3$ | $NH_2$ | Cl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | Br |
| amino acid | amino acid | $CH_3$ | $NH_2$ | I |
| amino acid | H | $CH_3$ | $NH_2$ | H |
| amino acid | H | $CH_3$ | $NH_2$ | $NH_2$ |
| amino acid | H | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| amino acid | H | $CH_3$ | $NH_2$ | NH-methyl |
| amino acid | H | $CH_3$ | $NH_2$ | NH-ethyl |
| amino acid | H | $CH_3$ | $NH_2$ | NH-acetyl |
| amino acid | H | $CH_3$ | $NH_2$ | OH |
| amino acid | H | $CH_3$ | $NH_2$ | OMe |
| amino acid | H | $CH_3$ | $NH_2$ | OEt |
| amino acid | H | $CH_3$ | $NH_2$ | O-cyclopropyl |
| amino acid | H | $CH_3$ | $NH_2$ | O-acetyl |
| amino acid | H | $CH_3$ | $NH_2$ | SH |
| amino acid | H | $CH_3$ | $NH_2$ | SMe |
| amino acid | H | $CH_3$ | $NH_2$ | SEt |
| amino acid | H | $CH_3$ | $NH_2$ | S-cyclopropyl |
| amino acid | H | $CH_3$ | $NH_2$ | F |
| amino acid | H | $CH_3$ | $NH_2$ | Cl |
| amino acid | H | $CH_3$ | $NH_2$ | Br |
| amino acid | H | $CH_3$ | $NH_2$ | I |
| amino acid | acyl | $CH_3$ | $NH_2$ | H |
| amino acid | acyl | $CH_3$ | $NH_2$ | $NH_2$ |
| amino acid | acyl | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | $CH_3$ | $NH_2$ | NH-methyl |
| amino acid | acyl | $CH_3$ | $NH_2$ | NH-ethyl |
| amino acid | acyl | $CH_3$ | $NH_2$ | NH-acetyl |
| amino acid | acyl | $CH_3$ | $NH_2$ | OH |
| amino acid | acyl | $CH_3$ | $NH_2$ | OMe |
| amino acid | acyl | $CH_3$ | $NH_2$ | OEt |
| amino acid | acyl | $CH_3$ | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | $CH_3$ | $NH_2$ | O-acetyl |
| amino acid | acyl | $CH_3$ | $NH_2$ | SH |
| amino acid | acyl | $CH_3$ | $NH_2$ | SMe |
| amino acid | acyl | $CH_3$ | $NH_2$ | SEt |
| amino acid | acyl | $CH_3$ | $NH_2$ | S-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | $CH_3$ | $NH_2$ | F |
| amino acid | acyl | $CH_3$ | $NH_2$ | Cl |
| amino acid | acyl | $CH_3$ | $NH_2$ | Br |
| amino acid | acyl | $CH_3$ | $NH_2$ | I |
| acyl | H | $CF_3$ | $NH_2$ | H |
| acyl | H | $CF_3$ | $NH_2$ | $NH_2$ |
| acyl | H | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| acyl | H | $CF_3$ | $NH_2$ | NH-methyl |
| acyl | H | $CF_3$ | $NH_2$ | NH-ethyl |
| acyl | H | $CF_3$ | $NH_2$ | NH-acetyl |
| acyl | H | $CF_3$ | $NH_2$ | OH |
| acyl | H | $CF_3$ | $NH_2$ | OMe |
| acyl | H | $CF_3$ | $NH_2$ | OEt |
| acyl | H | $CF_3$ | $NH_2$ | O-cyclopropyl |
| acyl | H | $CF_3$ | $NH_2$ | O-acetyl |
| acyl | H | $CF_3$ | $NH_2$ | SH |
| acyl | H | $CF_3$ | $NH_2$ | SMe |
| acyl | H | $CF_3$ | $NH_2$ | SEt |
| acyl | H | $CF_3$ | $NH_2$ | S-cyclopropyl |
| acyl | H | $CF_3$ | $NH_2$ | F |
| acyl | H | $CF_3$ | $NH_2$ | Cl |
| acyl | H | $CF_3$ | $NH_2$ | Br |
| acyl | H | $CF_3$ | $NH_2$ | I |
| acyl | acyl | $CF_3$ | $NH_2$ | H |
| acyl | acyl | $CF_3$ | $NH_2$ | $NH_2$ |
| acyl | acyl | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | $CF_3$ | $NH_2$ | NH-methyl |
| acyl | acyl | $CF_3$ | $NH_2$ | NH-ethyl |
| acyl | acyl | $CF_3$ | $NH_2$ | NH-acetyl |
| acyl | acyl | $CF_3$ | $NH_2$ | OH |
| acyl | acyl | $CF_3$ | $NH_2$ | OMe |
| acyl | acyl | $CF_3$ | $NH_2$ | OEt |
| acyl | acyl | $CF_3$ | $NH_2$ | O-cyclopropyl |
| acyl | acyl | $CF_3$ | $NH_2$ | O-acetyl |
| acyl | acyl | $CF_3$ | $NH_2$ | SH |
| acyl | acyl | $CF_3$ | $NH_2$ | SMe |
| acyl | acyl | $CF_3$ | $NH_2$ | SEt |
| acyl | acyl | $CF_3$ | $NH_2$ | S-cyclopropyl |
| acyl | acyl | $CF_3$ | $NH_2$ | F |
| acyl | acyl | $CF_3$ | $NH_2$ | Cl |
| acyl | acyl | $CF_3$ | $NH_2$ | Br |
| acyl | acyl | $CF_3$ | $NH_2$ | I |
| acyl | amino acid | $CF_3$ | $NH_2$ | H |
| acyl | amino acid | $CF_3$ | $NH_2$ | $NH_2$ |
| acyl | amino acid | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | $CF_3$ | $NH_2$ | NH-methyl |
| acyl | amino acid | $CF_3$ | $NH_2$ | NH-ethyl |
| acyl | amino acid | $CF_3$ | $NH_2$ | NH-acetyl |
| acyl | amino acid | $CF_3$ | $NH_2$ | OH |
| acyl | amino acid | $CF_3$ | $NH_2$ | OMe |
| acyl | amino acid | $CF_3$ | $NH_2$ | OEt |
| acyl | amino acid | $CF_3$ | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | $CF_3$ | $NH_2$ | O-acetyl |
| acyl | amino acid | $CF_3$ | $NH_2$ | SH |
| acyl | amino acid | $CF_3$ | $NH_2$ | SMe |
| acyl | amino acid | $CF_3$ | $NH_2$ | SEt |
| acyl | amino acid | $CF_3$ | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | $CF_3$ | $NH_2$ | F |
| acyl | amino acid | $CF_3$ | $NH_2$ | Cl |
| acyl | amino acid | $CF_3$ | $NH_2$ | Br |
| acyl | amino acid | $CF_3$ | $NH_2$ | I |
| H | acyl | $CF_3$ | $NH_2$ | H |
| H | acyl | $CF_3$ | $NH_2$ | $NH_2$ |
| H | acyl | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| H | acyl | $CF_3$ | $NH_2$ | NH-methyl |
| H | acyl | $CF_3$ | $NH_2$ | NH-ethyl |
| H | acyl | $CF_3$ | $NH_2$ | NH-acetyl |
| H | acyl | $CF_3$ | $NH_2$ | OH |
| H | acyl | $CF_3$ | $NH_2$ | OMe |
| H | acyl | $CF_3$ | $NH_2$ | OEt |
| H | acyl | $CF_3$ | $NH_2$ | O-cyclopropyl |
| H | acyl | $CF_3$ | $NH_2$ | O-acetyl |
| H | acyl | $CF_3$ | $NH_2$ | SH |
| H | acyl | $CF_3$ | $NH_2$ | SMe |
| H | acyl | $CF_3$ | $NH_2$ | SEt |
| H | acyl | $CF_3$ | $NH_2$ | S-cyclopropyl |
| H | acyl | $CF_3$ | $NH_2$ | F |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | $CF_3$ | $NH_2$ | Cl |
| H | acyl | $CF_3$ | $NH_2$ | Br |
| H | acyl | $CF_3$ | $NH_2$ | I |
| H | amino acid | $CF_3$ | $NH_2$ | H |
| H | amino acid | $CF_3$ | $NH_2$ | $NH_2$ |
| H | amino acid | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| H | amino acid | $CF_3$ | $NH_2$ | NH-methyl |
| H | amino acid | $CF_3$ | $NH_2$ | NH-ethyl |
| H | amino acid | $CF_3$ | $NH_2$ | NH-acetyl |
| H | amino acid | $CF_3$ | $NH_2$ | OH |
| H | amino acid | $CF_3$ | $NH_2$ | OMe |
| H | amino acid | $CF_3$ | $NH_2$ | OEt |
| H | amino acid | $CF_3$ | $NH_2$ | O-cyclopropyl |
| H | amino acid | $CF_3$ | $NH_2$ | O-acetyl |
| H | amino acid | $CF_3$ | $NH_2$ | SH |
| H | amino acid | $CF_3$ | $NH_2$ | SMe |
| H | amino acid | $CF_3$ | $NH_2$ | SEt |
| H | amino acid | $CF_3$ | $NH_2$ | S-cyclopropyl |
| H | amino acid | $CF_3$ | $NH_2$ | F |
| H | amino acid | $CF_3$ | $NH_2$ | Cl |
| H | amino acid | $CF_3$ | $NH_2$ | Br |
| H | amino acid | $CF_3$ | $NH_2$ | I |
| amino acid | amino acid | $CF_3$ | $NH_2$ | H |
| amino acid | amino acid | $CF_3$ | $NH_2$ | $NH_2$ |
| amino acid | amino acid | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | NH-methyl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | NH-ethyl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | NH-acetyl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | OH |
| amino acid | amino acid | $CF_3$ | $NH_2$ | OMe |
| amino acid | amino acid | $CF_3$ | $NH_2$ | OEt |
| amino acid | amino acid | $CF_3$ | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | O-acetyl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | SH |
| amino acid | amino acid | $CF_3$ | $NH_2$ | SMe |
| amino acid | amino acid | $CF_3$ | $NH_2$ | SEt |
| amino acid | amino acid | $CF_3$ | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | F |
| amino acid | amino acid | $CF_3$ | $NH_2$ | Cl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | Br |
| amino acid | amino acid | $CF_3$ | $NH_2$ | I |
| amino acid | H | $CF_3$ | $NH_2$ | H |
| amino acid | H | $CF_3$ | $NH_2$ | $NH_2$ |
| amino acid | H | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| amino acid | H | $CF_3$ | $NH_2$ | NH-methyl |
| amino acid | H | $CF_3$ | $NH_2$ | NH-ethyl |
| amino acid | H | $CF_3$ | $NH_2$ | NH-acetyl |
| amino acid | H | $CF_3$ | $NH_2$ | OH |
| amino acid | H | $CF_3$ | $NH_2$ | OMe |
| amino acid | H | $CF_3$ | $NH_2$ | OEt |
| amino acid | H | $CF_3$ | $NH_2$ | O-cyclopropyl |
| amino acid | H | $CF_3$ | $NH_2$ | O-acetyl |
| amino acid | H | $CF_3$ | $NH_2$ | SH |
| amino acid | H | $CF_3$ | $NH_2$ | SMe |
| amino acid | H | $CF_3$ | $NH_2$ | SEt |
| amino acid | H | $CF_3$ | $NH_2$ | S-cyclopropyl |
| amino acid | H | $CF_3$ | $NH_2$ | F |
| amino acid | H | $CF_3$ | $NH_2$ | Cl |
| amino acid | H | $CF_3$ | $NH_2$ | Br |
| amino acid | H | $CF_3$ | $NH_2$ | I |
| amino acid | acyl | $CF_3$ | $NH_2$ | H |
| amino acid | acyl | $CF_3$ | $NH_2$ | $NH_2$ |
| amino acid | acyl | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | $CF_3$ | $NH_2$ | NH-methyl |
| amino acid | acyl | $CF_3$ | $NH_2$ | NH-ethyl |
| amino acid | acyl | $CF_3$ | $NH_2$ | NH-acetyl |
| amino acid | acyl | $CF_3$ | $NH_2$ | OH |
| amino acid | acyl | $CF_3$ | $NH_2$ | OMe |
| amino acid | acyl | $CF_3$ | $NH_2$ | OEt |
| amino acid | acyl | $CF_3$ | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | $CF_3$ | $NH_2$ | O-acetyl |
| amino acid | acyl | $CF_3$ | $NH_2$ | SH |
| amino acid | acyl | $CF_3$ | $NH_2$ | SMe |
| amino acid | acyl | $CF_3$ | $NH_2$ | SEt |
| amino acid | acyl | $CF_3$ | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | $CF_3$ | $NH_2$ | F |
| amino acid | acyl | $CF_3$ | $NH_2$ | Cl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | $CF_3$ | $NH_2$ | Br |
| amino acid | acyl | $CF_3$ | $NH_2$ | I |
| acyl | H | Br | $NH_2$ | H |
| acyl | H | Br | $NH_2$ | $NH_2$ |
| acyl | H | Br | $NH_2$ | NH-cyclopropyl |
| acyl | H | Br | $NH_2$ | NH-methyl |
| acyl | H | Br | $NH_2$ | NH-ethyl |
| acyl | H | Br | $NH_2$ | NH-acetyl |
| acyl | H | Br | $NH_2$ | OH |
| acyl | H | Br | $NH_2$ | OMe |
| acyl | H | Br | $NH_2$ | OEt |
| acyl | H | Br | $NH_2$ | O-cyclopropyl |
| acyl | H | Br | $NH_2$ | O-acetyl |
| acyl | H | Br | $NH_2$ | SH |
| acyl | H | Br | $NH_2$ | SMe |
| acyl | H | Br | $NH_2$ | SEt |
| acyl | H | Br | $NH_2$ | S-cyclopropyl |
| acyl | H | Br | $NH_2$ | F |
| acyl | H | Br | $NH_2$ | Cl |
| acyl | H | Br | $NH_2$ | Br |
| acyl | H | Br | $NH_2$ | I |
| acyl | acyl | Br | $NH_2$ | H |
| acyl | acyl | Br | $NH_2$ | $NH_2$ |
| acyl | acyl | Br | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | Br | $NH_2$ | NH-methyl |
| acyl | acyl | Br | $NH_2$ | NH-ethyl |
| acyl | acyl | Br | $NH_2$ | NH-acetyl |
| acyl | acyl | Br | $NH_2$ | OH |
| acyl | acyl | Br | $NH_2$ | OMe |
| acyl | acyl | Br | $NH_2$ | OEt |
| acyl | acyl | Br | $NH_2$ | O-cyclopropyl |
| acyl | acyl | Br | $NH_2$ | O-acetyl |
| acyl | acyl | Br | $NH_2$ | SH |
| acyl | acyl | Br | $NH_2$ | SMe |
| acyl | acyl | Br | $NH_2$ | SEt |
| acyl | acyl | Br | $NH_2$ | S-cyclopropyl |
| acyl | acyl | Br | $NH_2$ | F |
| acyl | acyl | Br | $NH_2$ | Cl |
| acyl | acyl | Br | $NH_2$ | Br |
| acyl | acyl | Br | $NH_2$ | I |
| acyl | amino acid | Br | $NH_2$ | H |
| acyl | amino acid | Br | $NH_2$ | $NH_2$ |
| acyl | amino acid | Br | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | Br | $NH_2$ | NH-methyl |
| acyl | amino acid | Br | $NH_2$ | NH-ethyl |
| acyl | amino acid | Br | $NH_2$ | NH-acetyl |
| acyl | amino acid | Br | $NH_2$ | OH |
| acyl | amino acid | Br | $NH_2$ | OMe |
| acyl | amino acid | Br | $NH_2$ | OEt |
| acyl | amino acid | Br | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | Br | $NH_2$ | O-acetyl |
| acyl | amino acid | Br | $NH_2$ | SH |
| acyl | amino acid | Br | $NH_2$ | SMe |
| acyl | amino acid | Br | $NH_2$ | SEt |
| acyl | amino acid | Br | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | Br | $NH_2$ | F |
| acyl | amino acid | Br | $NH_2$ | Cl |
| acyl | amino acid | Br | $NH_2$ | Br |
| acyl | amino acid | Br | $NH_2$ | I |
| H | acyl | Br | $NH_2$ | H |
| H | acyl | Br | $NH_2$ | $NH_2$ |
| H | acyl | Br | $NH_2$ | NH-cyclopropyl |
| H | acyl | Br | $NH_2$ | NH-methyl |
| H | acyl | Br | $NH_2$ | NH-ethyl |
| H | acyl | Br | $NH_2$ | NH-acetyl |
| H | acyl | Br | $NH_2$ | OH |
| H | acyl | Br | $NH_2$ | OMe |
| H | acyl | Br | $NH_2$ | OEt |
| H | acyl | Br | $NH_2$ | O-cyclopropyl |
| H | acyl | Br | $NH_2$ | O-acetyl |
| H | acyl | Br | $NH_2$ | SH |
| H | acyl | Br | $NH_2$ | SMe |
| H | acyl | Br | $NH_2$ | SEt |
| H | acyl | Br | $NH_2$ | S-cyclopropyl |
| H | acyl | Br | $NH_2$ | F |
| H | acyl | Br | $NH_2$ | Cl |
| H | acyl | Br | $NH_2$ | Br |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | Br | $NH_2$ | I |
| H | amino acid | Br | $NH_2$ | H |
| H | amino acid | Br | $NH_2$ | $NH_2$ |
| H | amino acid | Br | $NH_2$ | NH-cyclopropyl |
| H | amino acid | Br | $NH_2$ | NH-methyl |
| H | amino acid | Br | $NH_2$ | NH-ethyl |
| H | amino acid | Br | $NH_2$ | NH-acetyl |
| H | amino acid | Br | $NH_2$ | OH |
| H | amino acid | Br | $NH_2$ | OMe |
| H | amino acid | Br | $NH_2$ | OEt |
| H | amino acid | Br | $NH_2$ | O-cyclopropyl |
| H | amino acid | Br | $NH_2$ | O-acetyl |
| H | amino acid | Br | $NH_2$ | SH |
| H | amino acid | Br | $NH_2$ | SMe |
| H | amino acid | Br | $NH_2$ | SEt |
| H | amino acid | Br | $NH_2$ | S-cyclopropyl |
| H | amino acid | Br | $NH_2$ | F |
| H | amino acid | Br | $NH_2$ | Cl |
| H | amino acid | Br | $NH_2$ | Br |
| H | amino acid | Br | $NH_2$ | I |
| amino acid | amino acid | Br | $NH_2$ | H |
| amino acid | amino acid | Br | $NH_2$ | $NH_2$ |
| amino acid | amino acid | Br | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | Br | $NH_2$ | NH-methyl |
| amino acid | amino acid | Br | $NH_2$ | NH-ethyl |
| amino acid | amino acid | Br | $NH_2$ | NH-acetyl |
| amino acid | amino acid | Br | $NH_2$ | OH |
| amino acid | amino acid | Br | $NH_2$ | OMe |
| amino acid | amino acid | Br | $NH_2$ | OEt |
| amino acid | amino acid | Br | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | Br | $NH_2$ | O-acetyl |
| amino acid | amino acid | Br | $NH_2$ | SH |
| amino acid | amino acid | Br | $NH_2$ | SMe |
| amino acid | amino acid | Br | $NH_2$ | SEt |
| amino acid | amino acid | Br | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | Br | $NH_2$ | F |
| amino acid | amino acid | Br | $NH_2$ | Cl |
| amino acid | amino acid | Br | $NH_2$ | Br |
| amino acid | amino acid | Br | $NH_2$ | I |
| amino acid | H | Br | $NH_2$ | H |
| amino acid | H | Br | $NH_2$ | $NH_2$ |
| amino acid | H | Br | $NH_2$ | NH-cyclopropyl |
| amino acid | H | Br | $NH_2$ | NH-methyl |
| amino acid | H | Br | $NH_2$ | NH-ethyl |
| amino acid | H | Br | $NH_2$ | NH-acetyl |
| amino acid | H | Br | $NH_2$ | OH |
| amino acid | H | Br | $NH_2$ | OMe |
| amino acid | H | Br | $NH_2$ | OEt |
| amino acid | H | Br | $NH_2$ | O-cyclopropyl |
| amino acid | H | Br | $NH_2$ | O-acetyl |
| amino acid | H | Br | $NH_2$ | SH |
| amino acid | H | Br | $NH_2$ | SMe |
| amino acid | H | Br | $NH_2$ | SEt |
| amino acid | H | Br | $NH_2$ | S-cyclopropyl |
| amino acid | H | Br | $NH_2$ | F |
| amino acid | H | Br | $NH_2$ | Cl |
| amino acid | H | Br | $NH_2$ | Br |
| amino acid | H | Br | $NH_2$ | I |
| amino acid | acyl | Br | $NH_2$ | H |
| amino acid | acyl | Br | $NH_2$ | $NH_2$ |
| amino acid | acyl | Br | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | Br | $NH_2$ | NH-methyl |
| amino acid | acyl | Br | $NH_2$ | NH-ethyl |
| amino acid | acyl | Br | $NH_2$ | NH-acetyl |
| amino acid | acyl | Br | $NH_2$ | OH |
| amino acid | acyl | Br | $NH_2$ | OMe |
| amino acid | acyl | Br | $NH_2$ | OEt |
| amino acid | acyl | Br | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | Br | $NH_2$ | O-acetyl |
| amino acid | acyl | Br | $NH_2$ | SH |
| amino acid | acyl | Br | $NH_2$ | SMe |
| amino acid | acyl | Br | $NH_2$ | SEt |
| amino acid | acyl | Br | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | Br | $NH_2$ | F |
| amino acid | acyl | Br | $NH_2$ | Cl |
| amino acid | acyl | Br | $NH_2$ | Br |
| amino acid | acyl | Br | $NH_2$ | I |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | Cl | $NH_2$ | H |
| acyl | H | Cl | $NH_2$ | $NH_2$ |
| acyl | H | Cl | $NH_2$ | NH-cyclopropyl |
| acyl | H | Cl | $NH_2$ | NH-methyl |
| acyl | H | Cl | $NH_2$ | NH-ethyl |
| acyl | H | Cl | $NH_2$ | NH-acetyl |
| acyl | H | Cl | $NH_2$ | OH |
| acyl | H | Cl | $NH_2$ | OMe |
| acyl | H | Cl | $NH_2$ | OEt |
| acyl | H | Cl | $NH_2$ | O-cyclopropyl |
| acyl | H | Cl | $NH_2$ | O-acetyl |
| acyl | H | Cl | $NH_2$ | SH |
| acyl | H | Cl | $NH_2$ | SMe |
| acyl | H | Cl | $NH_2$ | SEt |
| acyl | H | Cl | $NH_2$ | S-cyclopropyl |
| acyl | H | Cl | $NH_2$ | F |
| acyl | H | Cl | $NH_2$ | Cl |
| acyl | H | Cl | $NH_2$ | Br |
| acyl | H | Cl | $NH_2$ | I |
| acyl | acyl | Cl | $NH_2$ | H |
| acyl | acyl | Cl | $NH_2$ | $NH_2$ |
| acyl | acyl | Cl | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | Cl | $NH_2$ | NH-methyl |
| acyl | acyl | Cl | $NH_2$ | NH-ethyl |
| acyl | acyl | Cl | $NH_2$ | NH-acetyl |
| acyl | acyl | Cl | $NH_2$ | OH |
| acyl | acyl | Cl | $NH_2$ | OMe |
| acyl | acyl | Cl | $NH_2$ | OEt |
| acyl | acyl | Cl | $NH_2$ | O-cyclopropyl |
| acyl | acyl | Cl | $NH_2$ | O-acetyl |
| acyl | acyl | Cl | $NH_2$ | SH |
| acyl | acyl | Cl | $NH_2$ | SMe |
| acyl | acyl | Cl | $NH_2$ | SEt |
| acyl | acyl | Cl | $NH_2$ | S-cyclopropyl |
| acyl | acyl | Cl | $NH_2$ | F |
| acyl | acyl | Cl | $NH_2$ | Cl |
| acyl | acyl | Cl | $NH_2$ | Br |
| acyl | acyl | Cl | $NH_2$ | I |
| acyl | amino acid | Cl | $NH_2$ | H |
| acyl | amino acid | Cl | $NH_2$ | $NH_2$ |
| acyl | amino acid | Cl | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | Cl | $NH_2$ | NH-methyl |
| acyl | amino acid | Cl | $NH_2$ | NH-ethyl |
| acyl | amino acid | Cl | $NH_2$ | NH-acetyl |
| acyl | amino acid | Cl | $NH_2$ | OH |
| acyl | amino acid | Cl | $NH_2$ | OMe |
| acyl | amino acid | Cl | $NH_2$ | OEt |
| acyl | amino acid | Cl | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | Cl | $NH_2$ | O-acetyl |
| acyl | amino acid | Cl | $NH_2$ | SH |
| acyl | amino acid | Cl | $NH_2$ | SMe |
| acyl | amino acid | Cl | $NH_2$ | SEt |
| acyl | amino acid | Cl | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | Cl | $NH_2$ | F |
| acyl | amino acid | Cl | $NH_2$ | Cl |
| acyl | amino acid | Cl | $NH_2$ | Br |
| acyl | amino acid | Cl | $NH_2$ | I |
| H | acyl | Cl | $NH_2$ | H |
| H | acyl | Cl | $NH_2$ | $NH_2$ |
| H | acyl | Cl | $NH_2$ | NH-cyclopropyl |
| H | acyl | Cl | $NH_2$ | NH-methyl |
| H | acyl | Cl | $NH_2$ | NH-ethyl |
| H | acyl | Cl | $NH_2$ | NH-acetyl |
| H | acyl | Cl | $NH_2$ | OH |
| H | acyl | Cl | $NH_2$ | OMe |
| H | acyl | Cl | $NH_2$ | OEt |
| H | acyl | Cl | $NH_2$ | O-cyclopropyl |
| H | acyl | Cl | $NH_2$ | O-acetyl |
| H | acyl | Cl | $NH_2$ | SH |
| H | acyl | Cl | $NH_2$ | SMe |
| H | acyl | Cl | $NH_2$ | SEt |
| H | acyl | Cl | $NH_2$ | S-cyclopropyl |
| H | acyl | Cl | $NH_2$ | F |
| H | acyl | Cl | $NH_2$ | Cl |
| H | acyl | Cl | $NH_2$ | Br |
| H | acyl | Cl | $NH_2$ | I |
| H | amino acid | Cl | $NH_2$ | H |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | Cl | $NH_2$ | $NH_2$ |
| H | amino acid | Cl | $NH_2$ | NH-cyclopropyl |
| H | amino acid | Cl | $NH_2$ | NH-methyl |
| H | amino acid | Cl | $NH_2$ | NH-ethyl |
| H | amino acid | Cl | $NH_2$ | NH-acetyl |
| H | amino acid | Cl | $NH_2$ | OH |
| H | amino acid | Cl | $NH_2$ | OMe |
| H | amino acid | Cl | $NH_2$ | OEt |
| H | amino acid | Cl | $NH_2$ | O-cyclopropyl |
| H | amino acid | Cl | $NH_2$ | O-acetyl |
| H | amino acid | Cl | $NH_2$ | SH |
| H | amino acid | Cl | $NH_2$ | SMe |
| H | amino acid | Cl | $NH_2$ | SEt |
| H | amino acid | Cl | $NH_2$ | S-cyclopropyl |
| H | amino acid | Cl | $NH_2$ | F |
| H | amino acid | Cl | $NH_2$ | Cl |
| H | amino acid | Cl | $NH_2$ | Br |
| H | amino acid | Cl | $NH_2$ | I |
| amino acid | amino acid | Cl | $NH_2$ | H |
| amino acid | amino acid | Cl | $NH_2$ | $NH_2$ |
| amino acid | amino acid | Cl | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | Cl | $NH_2$ | NH-methyl |
| amino acid | amino acid | Cl | $NH_2$ | NH-ethyl |
| amino acid | amino acid | Cl | $NH_2$ | NH-acetyl |
| amino acid | amino acid | Cl | $NH_2$ | OH |
| amino acid | amino acid | Cl | $NH_2$ | OMe |
| amino acid | amino acid | Cl | $NH_2$ | OEt |
| amino acid | amino acid | Cl | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | Cl | $NH_2$ | O-acetyl |
| amino acid | amino acid | Cl | $NH_2$ | SH |
| amino acid | amino acid | Cl | $NH_2$ | SMe |
| amino acid | amino acid | Cl | $NH_2$ | SEt |
| amino acid | amino acid | Cl | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | Cl | $NH_2$ | F |
| amino acid | amino acid | Cl | $NH_2$ | Cl |
| amino acid | amino acid | Cl | $NH_2$ | Br |
| amino acid | amino acid | Cl | $NH_2$ | I |
| amino acid | H | Cl | $NH_2$ | H |
| amino acid | H | Cl | $NH_2$ | $NH_2$ |
| amino acid | H | Cl | $NH_2$ | NH-cyclopropyl |
| amino acid | H | Cl | $NH_2$ | NH-methyl |
| amino acid | H | Cl | $NH_2$ | NH-ethyl |
| amino acid | H | Cl | $NH_2$ | NH-acetyl |
| amino acid | H | Cl | $NH_2$ | OH |
| amino acid | H | Cl | $NH_2$ | OMe |
| amino acid | H | Cl | $NH_2$ | OEt |
| amino acid | H | Cl | $NH_2$ | O-cyclopropyl |
| amino acid | H | Cl | $NH_2$ | O-acetyl |
| amino acid | H | Cl | $NH_2$ | SH |
| amino acid | H | Cl | $NH_2$ | SMe |
| amino acid | H | Cl | $NH_2$ | SEt |
| amino acid | H | Cl | $NH_2$ | S-cyclopropyl |
| amino acid | H | Cl | $NH_2$ | F |
| amino acid | H | Cl | $NH_2$ | Cl |
| amino acid | H | Cl | $NH_2$ | Br |
| amino acid | H | Cl | $NH_2$ | I |
| amino acid | acyl | Cl | $NH_2$ | H |
| amino acid | acyl | Cl | $NH_2$ | $NH_2$ |
| amino acid | acyl | Cl | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | Cl | $NH_2$ | NH-methyl |
| amino acid | acyl | Cl | $NH_2$ | NH-ethyl |
| amino acid | acyl | Cl | $NH_2$ | NH-acetyl |
| amino acid | acyl | Cl | $NH_2$ | OH |
| amino acid | acyl | Cl | $NH_2$ | OMe |
| amino acid | acyl | Cl | $NH_2$ | OEt |
| amino acid | acyl | Cl | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | Cl | $NH_2$ | O-acetyl |
| amino acid | acyl | Cl | $NH_2$ | SH |
| amino acid | acyl | Cl | $NH_2$ | SMe |
| amino acid | acyl | Cl | $NH_2$ | SEt |
| amino acid | acyl | Cl | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | Cl | $NH_2$ | F |
| amino acid | acyl | Cl | $NH_2$ | Cl |
| amino acid | acyl | Cl | $NH_2$ | Br |
| amino acid | acyl | Cl | $NH_2$ | I |
| acyl | H | F | $NH_2$ | H |
| acyl | H | F | $NH_2$ | $NH_2$ |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | F | $NH_2$ | NH-cyclopropyl |
| acyl | H | F | $NH_2$ | NH-methyl |
| acyl | H | F | $NH_2$ | NH-ethyl |
| acyl | H | F | $NH_2$ | NH-acetyl |
| acyl | H | F | $NH_2$ | OH |
| acyl | H | F | $NH_2$ | OMe |
| acyl | H | F | $NH_2$ | OEt |
| acyl | H | F | $NH_2$ | O-cyclopropyl |
| acyl | H | F | $NH_2$ | O-acetyl |
| acyl | H | F | $NH_2$ | SH |
| acyl | H | F | $NH_2$ | SMe |
| acyl | H | F | $NH_2$ | SEt |
| acyl | H | F | $NH_2$ | S-cyclopropyl |
| acyl | H | F | $NH_2$ | F |
| acyl | H | F | $NH_2$ | Cl |
| acyl | H | F | $NH_2$ | Br |
| acyl | H | F | $NH_2$ | I |
| acyl | acyl | F | $NH_2$ | H |
| acyl | acyl | F | $NH_2$ | $NH_2$ |
| acyl | acyl | F | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | F | $NH_2$ | NH-methyl |
| acyl | acyl | F | $NH_2$ | NH-ethyl |
| acyl | acyl | F | $NH_2$ | NH-acetyl |
| acyl | acyl | F | $NH_2$ | OH |
| acyl | acyl | F | $NH_2$ | OMe |
| acyl | acyl | F | $NH_2$ | OEt |
| acyl | acyl | F | $NH_2$ | O-cyclopropyl |
| acyl | acyl | F | $NH_2$ | O-acetyl |
| acyl | acyl | F | $NH_2$ | SH |
| acyl | acyl | F | $NH_2$ | SMe |
| acyl | acyl | F | $NH_2$ | SEt |
| acyl | acyl | F | $NH_2$ | S-cyclopropyl |
| acyl | acyl | F | $NH_2$ | F |
| acyl | acyl | F | $NH_2$ | Cl |
| acyl | acyl | F | $NH_2$ | Br |
| acyl | acyl | F | $NH_2$ | I |
| acyl | amino acid | F | $NH_2$ | H |
| acyl | amino acid | F | $NH_2$ | $NH_2$ |
| acyl | amino acid | F | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | F | $NH_2$ | NH-methyl |
| acyl | amino acid | F | $NH_2$ | NH-ethyl |
| acyl | amino acid | F | $NH_2$ | NH-acetyl |
| acyl | amino acid | F | $NH_2$ | OH |
| acyl | amino acid | F | $NH_2$ | OMe |
| acyl | amino acid | F | $NH_2$ | OEt |
| acyl | amino acid | F | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | F | $NH_2$ | O-acetyl |
| acyl | amino acid | F | $NH_2$ | SH |
| acyl | amino acid | F | $NH_2$ | SMe |
| acyl | amino acid | F | $NH_2$ | SEt |
| acyl | amino acid | F | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | F | $NH_2$ | F |
| acyl | amino acid | F | $NH_2$ | Cl |
| acyl | amino acid | F | $NH_2$ | Br |
| acyl | amino acid | F | $NH_2$ | I |
| H | acyl | F | $NH_2$ | H |
| H | acyl | F | $NH_2$ | $NH_2$ |
| H | acyl | F | $NH_2$ | NH-cyclopropyl |
| H | acyl | F | $NH_2$ | NH-methyl |
| H | acyl | F | $NH_2$ | NH-ethyl |
| H | acyl | F | $NH_2$ | NH-acetyl |
| H | acyl | F | $NH_2$ | OH |
| H | acyl | F | $NH_2$ | OMe |
| H | acyl | F | $NH_2$ | OEt |
| H | acyl | F | $NH_2$ | O-cyclopropyl |
| H | acyl | F | $NH_2$ | O-acetyl |
| H | acyl | F | $NH_2$ | SH |
| H | acyl | F | $NH_2$ | SMe |
| H | acyl | F | $NH_2$ | SEt |
| H | acyl | F | $NH_2$ | S-cyclopropyl |
| H | acyl | F | $NH_2$ | F |
| H | acyl | F | $NH_2$ | Cl |
| H | acyl | F | $NH_2$ | Br |
| H | acyl | F | $NH_2$ | I |
| H | amino acid | F | $NH_2$ | H |
| H | amino acid | F | $NH_2$ | $NH_2$ |
| H | amino acid | F | $NH_2$ | NH-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | F | $NH_2$ | NH-methyl |
| H | amino acid | F | $NH_2$ | NH-ethyl |
| H | amino acid | F | $NH_2$ | NH-acetyl |
| H | amino acid | F | $NH_2$ | OH |
| H | amino acid | F | $NH_2$ | OMe |
| H | amino acid | F | $NH_2$ | OEt |
| H | amino acid | F | $NH_2$ | O-cyclopropyl |
| H | amino acid | F | $NH_2$ | O-acetyl |
| H | amino acid | F | $NH_2$ | SH |
| H | amino acid | F | $NH_2$ | SMe |
| H | amino acid | F | $NH_2$ | SEt |
| H | amino acid | F | $NH_2$ | S-cyclopropyl |
| H | amino acid | F | $NH_2$ | F |
| H | amino acid | F | $NH_2$ | Cl |
| H | amino acid | F | $NH_2$ | Br |
| H | amino acid | F | $NH_2$ | I |
| amino acid | amino acid | F | $NH_2$ | H |
| amino acid | amino acid | F | $NH_2$ | $NH_2$ |
| amino acid | amino acid | F | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | F | $NH_2$ | NH-methyl |
| amino acid | amino acid | F | $NH_2$ | NH-ethyl |
| amino acid | amino acid | F | $NH_2$ | NH-acetyl |
| amino acid | amino acid | F | $NH_2$ | OH |
| amino acid | amino acid | F | $NH_2$ | OMe |
| amino acid | amino acid | F | $NH_2$ | OEt |
| amino acid | amino acid | F | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | F | $NH_2$ | O-acetyl |
| amino acid | amino acid | F | $NH_2$ | SH |
| amino acid | amino acid | F | $NH_2$ | SMe |
| amino acid | amino acid | F | $NH_2$ | SEt |
| amino acid | amino acid | F | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | F | $NH_2$ | F |
| amino acid | amino acid | F | $NH_2$ | Cl |
| amino acid | amino acid | F | $NH_2$ | Br |
| amino acid | amino acid | F | $NH_2$ | I |
| amino acid | H | F | $NH_2$ | H |
| amino acid | H | F | $NH_2$ | $NH_2$ |
| amino acid | H | F | $NH_2$ | NH-cyclopropyl |
| amino acid | H | F | $NH_2$ | NH-methyl |
| amino acid | H | F | $NH_2$ | NH-ethyl |
| amino acid | H | F | $NH_2$ | NH-acetyl |
| amino acid | H | F | $NH_2$ | OH |
| amino acid | H | F | $NH_2$ | OMe |
| amino acid | H | F | $NH_2$ | OEt |
| amino acid | H | F | $NH_2$ | O-cyclopropyl |
| amino acid | H | F | $NH_2$ | O-acetyl |
| amino acid | H | F | $NH_2$ | SH |
| amino acid | H | F | $NH_2$ | SMe |
| amino acid | H | F | $NH_2$ | SEt |
| amino acid | H | F | $NH_2$ | S-cyclopropyl |
| amino acid | H | F | $NH_2$ | F |
| amino acid | H | F | $NH_2$ | Cl |
| amino acid | H | F | $NH_2$ | Br |
| amino acid | H | F | $NH_2$ | I |
| amino acid | acyl | F | $NH_2$ | H |
| amino acid | acyl | F | $NH_2$ | $NH_2$ |
| amino acid | acyl | F | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | F | $NH_2$ | NH-methyl |
| amino acid | acyl | F | $NH_2$ | NH-ethyl |
| amino acid | acyl | F | $NH_2$ | NH-acetyl |
| amino acid | acyl | F | $NH_2$ | OH |
| amino acid | acyl | F | $NH_2$ | OMe |
| amino acid | acyl | F | $NH_2$ | OEt |
| amino acid | acyl | F | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | F | $NH_2$ | O-acetyl |
| amino acid | acyl | F | $NH_2$ | SH |
| amino acid | acyl | F | $NH_2$ | SMe |
| amino acid | acyl | F | $NH_2$ | SEt |
| amino acid | acyl | F | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | F | $NH_2$ | F |
| amino acid | acyl | F | $NH_2$ | Cl |
| amino acid | acyl | F | $NH_2$ | Br |
| amino acid | acyl | F | $NH_2$ | I |
| acyl | H | $NH_2$ | $NH_2$ | H |
| acyl | H | $NH_2$ | $NH_2$ | $NH_2$ |
| acyl | H | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| acyl | H | $NH_2$ | $NH_2$ | NH-methyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | $NH_2$ | $NH_2$ | NH-ethyl |
| acyl | H | $NH_2$ | $NH_2$ | NH-acetyl |
| acyl | H | $NH_2$ | $NH_2$ | OH |
| acyl | H | $NH_2$ | $NH_2$ | OMe |
| acyl | H | $NH_2$ | $NH_2$ | OEt |
| acyl | H | $NH_2$ | $NH_2$ | O-cyclopropyl |
| acyl | H | $NH_2$ | $NH_2$ | O-acetyl |
| acyl | H | $NH_2$ | $NH_2$ | SH |
| acyl | H | $NH_2$ | $NH_2$ | SMe |
| acyl | H | $NH_2$ | $NH_2$ | SEt |
| acyl | H | $NH_2$ | $NH_2$ | S-cyclopropyl |
| acyl | H | $NH_2$ | $NH_2$ | F |
| acyl | H | $NH_2$ | $NH_2$ | Cl |
| acyl | H | $NH_2$ | $NH_2$ | Br |
| acyl | H | $NH_2$ | $NH_2$ | I |
| acyl | acyl | $NH_2$ | $NH_2$ | H |
| acyl | acyl | $NH_2$ | $NH_2$ | $NH_2$ |
| acyl | acyl | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | $NH_2$ | $NH_2$ | NH-methyl |
| acyl | acyl | $NH_2$ | $NH_2$ | NH-ethyl |
| acyl | acyl | $NH_2$ | $NH_2$ | NH-acetyl |
| acyl | acyl | $NH_2$ | $NH_2$ | OH |
| acyl | acyl | $NH_2$ | $NH_2$ | OMe |
| acyl | acyl | $NH_2$ | $NH_2$ | OEt |
| acyl | acyl | $NH_2$ | $NH_2$ | O-cyclopropyl |
| acyl | acyl | $NH_2$ | $NH_2$ | O-acetyl |
| acyl | acyl | $NH_2$ | $NH_2$ | SH |
| acyl | acyl | $NH_2$ | $NH_2$ | SMe |
| acyl | acyl | $NH_2$ | $NH_2$ | SEt |
| acyl | acyl | $NH_2$ | $NH_2$ | S-cyclopropyl |
| acyl | acyl | $NH_2$ | $NH_2$ | F |
| acyl | acyl | $NH_2$ | $NH_2$ | Cl |
| acyl | acyl | $NH_2$ | $NH_2$ | Br |
| acyl | acyl | $NH_2$ | $NH_2$ | I |
| acyl | amino acid | $NH_2$ | $NH_2$ | H |
| acyl | amino acid | $NH_2$ | $NH_2$ | $NH_2$ |
| acyl | amino acid | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | $NH_2$ | $NH_2$ | NH-methyl |
| acyl | amino acid | $NH_2$ | $NH_2$ | NH-ethyl |
| acyl | amino acid | $NH_2$ | $NH_2$ | NH-acetyl |
| acyl | amino acid | $NH_2$ | $NH_2$ | OH |
| acyl | amino acid | $NH_2$ | $NH_2$ | OMe |
| acyl | amino acid | $NH_2$ | $NH_2$ | OEt |
| acyl | amino acid | $NH_2$ | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | $NH_2$ | $NH_2$ | O-acetyl |
| acyl | amino acid | $NH_2$ | $NH_2$ | SH |
| acyl | amino acid | $NH_2$ | $NH_2$ | SMe |
| acyl | amino acid | $NH_2$ | $NH_2$ | SEt |
| acyl | amino acid | $NH_2$ | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | $NH_2$ | F |
| acyl | amino acid | $NH_2$ | $NH_2$ | Cl |
| acyl | amino acid | $NH_2$ | $NH_2$ | Br |
| acyl | amino acid | $NH_2$ | $NH_2$ | I |
| H | acyl | $NH_2$ | $NH_2$ | H |
| H | acyl | $NH_2$ | $NH_2$ | $NH_2$ |
| H | acyl | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| H | acyl | $NH_2$ | $NH_2$ | NH-methyl |
| H | acyl | $NH_2$ | $NH_2$ | NH-ethyl |
| H | acyl | $NH_2$ | $NH_2$ | NH-acetyl |
| H | acyl | $NH_2$ | $NH_2$ | OH |
| H | acyl | $NH_2$ | $NH_2$ | OMe |
| H | acyl | $NH_2$ | $NH_2$ | OEt |
| H | acyl | $NH_2$ | $NH_2$ | O-cyclopropyl |
| H | acyl | $NH_2$ | $NH_2$ | O-acetyl |
| H | acyl | $NH_2$ | $NH_2$ | SH |
| H | acyl | $NH_2$ | $NH_2$ | SMe |
| H | acyl | $NH_2$ | $NH_2$ | SEt |
| H | acyl | $NH_2$ | $NH_2$ | S-cyclopropyl |
| H | acyl | $NH_2$ | $NH_2$ | F |
| H | acyl | $NH_2$ | $NH_2$ | Cl |
| H | acyl | $NH_2$ | $NH_2$ | Br |
| H | acyl | $NH_2$ | $NH_2$ | I |
| H | amino acid | $NH_2$ | $NH_2$ | H |
| H | amino acid | $NH_2$ | $NH_2$ | $NH_2$ |
| H | amino acid | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| H | amino acid | $NH_2$ | $NH_2$ | NH-methyl |
| H | amino acid | $NH_2$ | $NH_2$ | NH-ethyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | $NH_2$ | $NH_2$ | NH-acetyl |
| H | amino acid | $NH_2$ | $NH_2$ | OH |
| H | amino acid | $NH_2$ | $NH_2$ | OMe |
| H | amino acid | $NH_2$ | $NH_2$ | OEt |
| H | amino acid | $NH_2$ | $NH_2$ | O-cyclopropyl |
| H | amino acid | $NH_2$ | $NH_2$ | O-acetyl |
| H | amino acid | $NH_2$ | $NH_2$ | SH |
| H | amino acid | $NH_2$ | $NH_2$ | SMe |
| H | amino acid | $NH_2$ | $NH_2$ | SEt |
| H | amino acid | $NH_2$ | $NH_2$ | S-cyclopropyl |
| H | amino acid | $NH_2$ | $NH_2$ | F |
| H | amino acid | $NH_2$ | $NH_2$ | Cl |
| H | amino acid | $NH_2$ | $NH_2$ | Br |
| H | amino acid | $NH_2$ | $NH_2$ | I |
| amino acid | amino acid | $NH_2$ | $NH_2$ | H |
| amino acid | amino acid | $NH_2$ | $NH_2$ | $NH_2$ |
| amino acid | amino acid | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | NH-methyl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | NH-ethyl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | NH-acetyl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | OH |
| amino acid | amino acid | $NH_2$ | $NH_2$ | OMe |
| amino acid | amino acid | $NH_2$ | $NH_2$ | OEt |
| amino acid | amino acid | $NH_2$ | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | O-acetyl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | SH |
| amino acid | amino acid | $NH_2$ | $NH_2$ | SMe |
| amino acid | amino acid | $NH_2$ | $NH_2$ | SEt |
| amino acid | amino acid | $NH_2$ | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | F |
| amino acid | amino acid | $NH_2$ | $NH_2$ | Cl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | Br |
| amino acid | amino acid | $NH_2$ | $NH_2$ | I |
| amino acid | H | $NH_2$ | $NH_2$ | H |
| amino acid | H | $NH_2$ | $NH_2$ | $NH_2$ |
| amino acid | H | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| amino acid | H | $NH_2$ | $NH_2$ | NH-methyl |
| amino acid | H | $NH_2$ | $NH_2$ | NH-ethyl |
| amino acid | H | $NH_2$ | $NH_2$ | NH-acetyl |
| amino acid | H | $NH_2$ | $NH_2$ | OH |
| amino acid | H | $NH_2$ | $NH_2$ | OMe |
| amino acid | H | $NH_2$ | $NH_2$ | OEt |
| amino acid | H | $NH_2$ | $NH_2$ | O-cyclopropyl |
| amino acid | H | $NH_2$ | $NH_2$ | O-acetyl |
| amino acid | H | $NH_2$ | $NH_2$ | SH |
| amino acid | H | $NH_2$ | $NH_2$ | SMe |
| amino acid | H | $NH_2$ | $NH_2$ | SEt |
| amino acid | H | $NH_2$ | $NH_2$ | S-cyclopropyl |
| amino acid | H | $NH_2$ | $NH_2$ | F |
| amino acid | H | $NH_2$ | $NH_2$ | Cl |
| amino acid | H | $NH_2$ | $NH_2$ | Br |
| amino acid | H | $NH_2$ | $NH_2$ | I |
| amino acid | acyl | $NH_2$ | $NH_2$ | H |
| amino acid | acyl | $NH_2$ | $NH_2$ | $NH_2$ |
| amino acid | acyl | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | $NH_2$ | $NH_2$ | NH-methyl |
| amino acid | acyl | $NH_2$ | $NH_2$ | NH-ethyl |
| amino acid | acyl | $NH_2$ | $NH_2$ | NH-acetyl |
| amino acid | acyl | $NH_2$ | $NH_2$ | OH |
| amino acid | acyl | $NH_2$ | $NH_2$ | OMe |
| amino acid | acyl | $NH_2$ | $NH_2$ | OEt |
| amino acid | acyl | $NH_2$ | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | $NH_2$ | $NH_2$ | O-acetyl |
| amino acid | acyl | $NH_2$ | $NH_2$ | SH |
| amino acid | acyl | $NH_2$ | $NH_2$ | SMe |
| amino acid | acyl | $NH_2$ | $NH_2$ | SEt |
| amino acid | acyl | $NH_2$ | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | $NH_2$ | $NH_2$ | F |
| amino acid | acyl | $NH_2$ | $NH_2$ | Cl |
| amino acid | acyl | $NH_2$ | $NH_2$ | Br |
| amino acid | acyl | $NH_2$ | $NH_2$ | I |
| acyl | H | SH | $NH_2$ | H |
| acyl | H | SH | $NH_2$ | $NH_2$ |
| acyl | H | SH | $NH_2$ | NH-cyclopropyl |
| acyl | H | SH | $NH_2$ | NH-methyl |
| acyl | H | SH | $NH_2$ | NH-ethyl |
| acyl | H | SH | $NH_2$ | NH-acetyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | SH | $NH_2$ | OH |
| acyl | H | SH | $NH_2$ | OMe |
| acyl | H | SH | $NH_2$ | OEt |
| acyl | H | SH | $NH_2$ | O-cyclopropyl |
| acyl | H | SH | $NH_2$ | O-acetyl |
| acyl | H | SH | $NH_2$ | SH |
| acyl | H | SH | $NH_2$ | SMe |
| acyl | H | SH | $NH_2$ | SEt |
| acyl | H | SH | $NH_2$ | S-cyclopropyl |
| acyl | H | SH | $NH_2$ | F |
| acyl | H | SH | $NH_2$ | Cl |
| acyl | H | SH | $NH_2$ | Br |
| acyl | H | SH | $NH_2$ | I |
| acyl | acyl | SH | $NH_2$ | H |
| acyl | acyl | SH | $NH_2$ | $NH_2$ |
| acyl | acyl | SH | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | SH | $NH_2$ | NH-methyl |
| acyl | acyl | SH | $NH_2$ | NH-ethyl |
| acyl | acyl | SH | $NH_2$ | NH-acetyl |
| acyl | acyl | SH | $NH_2$ | OH |
| acyl | acyl | SH | $NH_2$ | OMe |
| acyl | acyl | SH | $NH_2$ | OEt |
| acyl | acyl | SH | $NH_2$ | O-cyclopropyl |
| acyl | acyl | SH | $NH_2$ | O-acetyl |
| acyl | acyl | SH | $NH_2$ | SH |
| acyl | acyl | SH | $NH_2$ | SMe |
| acyl | acyl | SH | $NH_2$ | SEt |
| acyl | acyl | SH | $NH_2$ | S-cyclopropyl |
| acyl | acyl | SH | $NH_2$ | F |
| acyl | acyl | SH | $NH_2$ | Cl |
| acyl | acyl | SH | $NH_2$ | Br |
| acyl | acyl | SH | $NH_2$ | I |
| acyl | amino acid | SH | $NH_2$ | H |
| acyl | amino acid | SH | $NH_2$ | $NH_2$ |
| acyl | amino acid | SH | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | SH | $NH_2$ | NH-methyl |
| acyl | amino acid | SH | $NH_2$ | NH-ethyl |
| acyl | amino acid | SH | $NH_2$ | NH-acetyl |
| acyl | amino acid | SH | $NH_2$ | OH |
| acyl | amino acid | SH | $NH_2$ | OMe |
| acyl | amino acid | SH | $NH_2$ | OEt |
| acyl | amino acid | SH | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | SH | $NH_2$ | O-acetyl |
| acyl | amino acid | SH | $NH_2$ | SH |
| acyl | amino acid | SH | $NH_2$ | SMe |
| acyl | amino acid | SH | $NH_2$ | SEt |
| acyl | amino acid | SH | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | SH | $NH_2$ | F |
| acyl | amino acid | SH | $NH_2$ | Cl |
| acyl | amino acid | SH | $NH_2$ | Br |
| acyl | amino acid | SH | $NH_2$ | I |
| H | acyl | SH | $NH_2$ | H |
| H | acyl | SH | $NH_2$ | $NH_2$ |
| H | acyl | SH | $NH_2$ | NH-cyclopropyl |
| H | acyl | SH | $NH_2$ | NH-methyl |
| H | acyl | SH | $NH_2$ | NH-ethyl |
| H | acyl | SH | $NH_2$ | NH-acetyl |
| H | acyl | SH | $NH_2$ | OH |
| H | acyl | SH | $NH_2$ | OMe |
| H | acyl | SH | $NH_2$ | OEt |
| H | acyl | SH | $NH_2$ | O-cyclopropyl |
| H | acyl | SH | $NH_2$ | O-acetyl |
| H | acyl | SH | $NH_2$ | SH |
| H | acyl | SH | $NH_2$ | SMe |
| H | acyl | SH | $NH_2$ | SEt |
| H | acyl | SH | $NH_2$ | S-cyclopropyl |
| H | acyl | SH | $NH_2$ | F |
| H | acyl | SH | $NH_2$ | Cl |
| H | acyl | SH | $NH_2$ | Br |
| H | acyl | SH | $NH_2$ | I |
| H | amino acid | SH | $NH_2$ | H |
| H | amino acid | SH | $NH_2$ | $NH_2$ |
| H | amino acid | SH | $NH_2$ | NH-cyclopropyl |
| H | amino acid | SH | $NH_2$ | NH-methyl |
| H | amino acid | SH | $NH_2$ | NH-ethyl |
| H | amino acid | SH | $NH_2$ | NH-acetyl |
| H | amino acid | SH | $NH_2$ | OH |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | SH | $NH_2$ | OMe |
| H | amino acid | SH | $NH_2$ | OEt |
| H | amino acid | SH | $NH_2$ | O-cyclopropyl |
| H | amino acid | SH | $NH_2$ | O-acetyl |
| H | amino acid | SH | $NH_2$ | SH |
| H | amino acid | SH | $NH_2$ | SMe |
| H | amino acid | SH | $NH_2$ | SEt |
| H | amino acid | SH | $NH_2$ | S-cyclopropyl |
| H | amino acid | SH | $NH_2$ | F |
| H | amino acid | SH | $NH_2$ | Cl |
| H | amino acid | SH | $NH_2$ | Br |
| H | amino acid | SH | $NH_2$ | I |
| amino acid | amino acid | SH | $NH_2$ | H |
| amino acid | amino acid | SH | $NH_2$ | $NH_2$ |
| amino acid | amino acid | SH | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | SH | $NH_2$ | NH-methyl |
| amino acid | amino acid | SH | $NH_2$ | NH-ethyl |
| amino acid | amino acid | SH | $NH_2$ | NH-acetyl |
| amino acid | amino acid | SH | $NH_2$ | OH |
| amino acid | amino acid | SH | $NH_2$ | OMe |
| amino acid | amino acid | SH | $NH_2$ | OEt |
| amino acid | amino acid | SH | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | SH | $NH_2$ | O-acetyl |
| amino acid | amino acid | SH | $NH_2$ | SH |
| amino acid | amino acid | SH | $NH_2$ | SMe |
| amino acid | amino acid | SH | $NH_2$ | SEt |
| amino acid | amino acid | SH | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | SH | $NH_2$ | F |
| amino acid | amino acid | SH | $NH_2$ | Cl |
| amino acid | amino acid | SH | $NH_2$ | Br |
| amino acid | amino acid | SH | $NH_2$ | I |
| amino acid | H | SH | $NH_2$ | H |
| amino acid | H | SH | $NH_2$ | $NH_2$ |
| amino acid | H | SH | $NH_2$ | NH-cyclopropyl |
| amino acid | H | SH | $NH_2$ | NH-methyl |
| amino acid | H | SH | $NH_2$ | NH-ethyl |
| amino acid | H | SH | $NH_2$ | NH-acetyl |
| amino acid | H | SH | $NH_2$ | OH |
| amino acid | H | SH | $NH_2$ | OMe |
| amino acid | H | SH | $NH_2$ | OEt |
| amino acid | H | SH | $NH_2$ | O-cyclopropyl |
| amino acid | H | SH | $NH_2$ | O-acetyl |
| amino acid | H | SH | $NH_2$ | SH |
| amino acid | H | SH | $NH_2$ | SMe |
| amino acid | H | SH | $NH_2$ | SEt |
| amino acid | H | SH | $NH_2$ | S-cyclopropyl |
| amino acid | H | SH | $NH_2$ | F |
| amino acid | H | SH | $NH_2$ | Cl |
| amino acid | H | SH | $NH_2$ | Br |
| amino acid | H | SH | $NH_2$ | I |
| amino acid | acyl | SH | $NH_2$ | H |
| amino acid | acyl | SH | $NH_2$ | $NH_2$ |
| amino acid | acyl | SH | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | SH | $NH_2$ | NH-methyl |
| amino acid | acyl | SH | $NH_2$ | NH-ethyl |
| amino acid | acyl | SH | $NH_2$ | NH-acetyl |
| amino acid | acyl | SH | $NH_2$ | OH |
| amino acid | acyl | SH | $NH_2$ | OMe |
| amino acid | acyl | SH | $NH_2$ | OEt |
| amino acid | acyl | SH | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | SH | $NH_2$ | O-acetyl |
| amino acid | acyl | SH | $NH_2$ | SH |
| amino acid | acyl | SH | $NH_2$ | SMe |
| amino acid | acyl | SH | $NH_2$ | SEt |
| amino acid | acyl | SH | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | SH | $NH_2$ | F |
| amino acid | acyl | SH | $NH_2$ | Cl |
| amino acid | acyl | SH | $NH_2$ | Br |
| amino acid | acyl | SH | $NH_2$ | I |
| acyl | H | OH | $NH_2$ | H |
| acyl | H | OH | $NH_2$ | $NH_2$ |
| acyl | H | OH | $NH_2$ | NH-cyclopropyl |
| acyl | H | OH | $NH_2$ | NH-methyl |
| acyl | H | OH | $NH_2$ | NH-ethyl |
| acyl | H | OH | $NH_2$ | NH-acetyl |
| acyl | H | OH | $NH_2$ | OH |
| acyl | H | OH | $NH_2$ | OMe |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | OH | $NH_2$ | OEt |
| acyl | H | OH | $NH_2$ | O-cyclopropyl |
| acyl | H | OH | $NH_2$ | O-acetyl |
| acyl | H | OH | $NH_2$ | SH |
| acyl | H | OH | $NH_2$ | SMe |
| acyl | H | OH | $NH_2$ | SEt |
| acyl | H | OH | $NH_2$ | S-cyclopropyl |
| acyl | H | OH | $NH_2$ | F |
| acyl | H | OH | $NH_2$ | Cl |
| acyl | H | OH | $NH_2$ | Br |
| acyl | H | OH | $NH_2$ | I |
| acyl | acyl | OH | $NH_2$ | H |
| acyl | acyl | OH | $NH_2$ | $NH_2$ |
| acyl | acyl | OH | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | OH | $NH_2$ | NH-methyl |
| acyl | acyl | OH | $NH_2$ | NH-ethyl |
| acyl | acyl | OH | $NH_2$ | NH-acetyl |
| acyl | acyl | OH | $NH_2$ | OH |
| acyl | acyl | OH | $NH_2$ | OMe |
| acyl | acyl | OH | $NH_2$ | OEt |
| acyl | acyl | OH | $NH_2$ | O-cyclopropyl |
| acyl | acyl | OH | $NH_2$ | O-acetyl |
| acyl | acyl | OH | $NH_2$ | SH |
| acyl | acyl | OH | $NH_2$ | SMe |
| acyl | acyl | OH | $NH_2$ | SEt |
| acyl | acyl | OH | $NH_2$ | S-cyclopropyl |
| acyl | acyl | OH | $NH_2$ | F |
| acyl | acyl | OH | $NH_2$ | Cl |
| acyl | acyl | OH | $NH_2$ | Br |
| acyl | acyl | OH | $NH_2$ | I |
| acyl | amino acid | OH | $NH_2$ | H |
| acyl | amino acid | OH | $NH_2$ | $NH_2$ |
| acyl | amino acid | OH | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | OH | $NH_2$ | NH-methyl |
| acyl | amino acid | OH | $NH_2$ | NH-ethyl |
| acyl | amino acid | OH | $NH_2$ | NH-acetyl |
| acyl | amino acid | OH | $NH_2$ | OH |
| acyl | amino acid | OH | $NH_2$ | OMe |
| acyl | amino acid | OH | $NH_2$ | OEt |
| acyl | amino acid | OH | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | OH | $NH_2$ | O-acetyl |
| acyl | amino acid | OH | $NH_2$ | SH |
| acyl | amino acid | OH | $NH_2$ | SMe |
| acyl | amino acid | OH | $NH_2$ | SEt |
| acyl | amino acid | OH | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | OH | $NH_2$ | F |
| acyl | amino acid | OH | $NH_2$ | Cl |
| acyl | amino acid | OH | $NH_2$ | Br |
| acyl | amino acid | OH | $NH_2$ | I |
| H | acyl | OH | $NH_2$ | H |
| H | acyl | OH | $NH_2$ | $NH_2$ |
| H | acyl | OH | $NH_2$ | NH-cyclopropyl |
| H | acyl | OH | $NH_2$ | NH-methyl |
| H | acyl | OH | $NH_2$ | NH-ethyl |
| H | acyl | OH | $NH_2$ | NH-acetyl |
| H | acyl | OH | $NH_2$ | OH |
| H | acyl | OH | $NH_2$ | OMe |
| H | acyl | OH | $NH_2$ | OEt |
| H | acyl | OH | $NH_2$ | O-cyclopropyl |
| H | acyl | OH | $NH_2$ | O-acetyl |
| H | acyl | OH | $NH_2$ | SH |
| H | acyl | OH | $NH_2$ | SMe |
| H | acyl | OH | $NH_2$ | SEt |
| H | acyl | OH | $NH_2$ | S-cyclopropyl |
| H | acyl | OH | $NH_2$ | F |
| H | acyl | OH | $NH_2$ | Cl |
| H | acyl | OH | $NH_2$ | Br |
| H | acyl | OH | $NH_2$ | I |
| H | amino acid | OH | $NH_2$ | H |
| H | amino acid | OH | $NH_2$ | $NH_2$ |
| H | amino acid | OH | $NH_2$ | NH-cyclopropyl |
| H | amino acid | OH | $NH_2$ | NH-methyl |
| H | amino acid | OH | $NH_2$ | NH-ethyl |
| H | amino acid | OH | $NH_2$ | NH-acetyl |
| H | amino acid | OH | $NH_2$ | OH |
| H | amino acid | OH | $NH_2$ | OMe |
| H | amino acid | OH | $NH_2$ | OEt |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | OH | $NH_2$ | O-cyclopropyl |
| H | amino acid | OH | $NH_2$ | O-acetyl |
| H | amino acid | OH | $NH_2$ | SH |
| H | amino acid | OH | $NH_2$ | SMe |
| H | amino acid | OH | $NH_2$ | SEt |
| H | amino acid | OH | $NH_2$ | S-cyclopropyl |
| H | amino acid | OH | $NH_2$ | F |
| H | amino acid | OH | $NH_2$ | Cl |
| H | amino acid | OH | $NH_2$ | Br |
| H | amino acid | OH | $NH_2$ | I |
| amino acid | amino acid | OH | $NH_2$ | H |
| amino acid | amino acid | OH | $NH_2$ | $NH_2$ |
| amino acid | amino acid | OH | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | OH | $NH_2$ | NH-methyl |
| amino acid | amino acid | OH | $NH_2$ | NH-ethyl |
| amino acid | amino acid | OH | $NH_2$ | NH-acetyl |
| amino acid | amino acid | OH | $NH_2$ | OH |
| amino acid | amino acid | OH | $NH_2$ | OMe |
| amino acid | amino acid | OH | $NH_2$ | OEt |
| amino acid | amino acid | OH | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | OH | $NH_2$ | O-acetyl |
| amino acid | amino acid | OH | $NH_2$ | SH |
| amino acid | amino acid | OH | $NH_2$ | SMe |
| amino acid | amino acid | OH | $NH_2$ | SEt |
| amino acid | amino acid | OH | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | OH | $NH_2$ | F |
| amino acid | amino acid | OH | $NH_2$ | Cl |
| amino acid | amino acid | OH | $NH_2$ | Br |
| amino acid | amino acid | OH | $NH_2$ | I |
| amino acid | H | OH | $NH_2$ | H |
| amino acid | H | OH | $NH_2$ | $NH_2$ |
| amino acid | H | OH | $NH_2$ | NH-cyclopropyl |
| amino acid | H | OH | $NH_2$ | NH-methyl |
| amino acid | H | OH | $NH_2$ | NH-ethyl |
| amino acid | H | OH | $NH_2$ | NH-acetyl |
| amino acid | H | OH | $NH_2$ | OH |
| amino acid | H | OH | $NH_2$ | OMe |
| amino acid | H | OH | $NH_2$ | OEt |
| amino acid | H | OH | $NH_2$ | O-cyclopropyl |
| amino acid | H | OH | $NH_2$ | O-acetyl |
| amino acid | H | OH | $NH_2$ | SH |
| amino acid | H | OH | $NH_2$ | SMe |
| amino acid | H | OH | $NH_2$ | SEt |
| amino acid | H | OH | $NH_2$ | S-cyclopropyl |
| amino acid | H | OH | $NH_2$ | F |
| amino acid | H | OH | $NH_2$ | Cl |
| amino acid | H | OH | $NH_2$ | Br |
| amino acid | H | OH | $NH_2$ | I |
| amino acid | acyl | OH | $NH_2$ | H |
| amino acid | acyl | OH | $NH_2$ | $NH_2$ |
| amino acid | acyl | OH | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | OH | $NH_2$ | NH-methyl |
| amino acid | acyl | OH | $NH_2$ | NH-ethyl |
| amino acid | acyl | OH | $NH_2$ | NH-acetyl |
| amino acid | acyl | OH | $NH_2$ | OH |
| amino acid | acyl | OH | $NH_2$ | OMe |
| amino acid | acyl | OH | $NH_2$ | OEt |
| amino acid | acyl | OH | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | OH | $NH_2$ | O-acetyl |
| amino acid | acyl | OH | $NH_2$ | SH |
| amino acid | acyl | OH | $NH_2$ | SMe |
| amino acid | acyl | OH | $NH_2$ | SEt |
| amino acid | acyl | OH | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | OH | $NH_2$ | F |
| amino acid | acyl | OH | $NH_2$ | Cl |
| amino acid | acyl | OH | $NH_2$ | Br |
| amino acid | acyl | OH | $NH_2$ | I |
| acyl | H | $CH_3$ | SH | H |
| acyl | H | $CH_3$ | SH | $NH_2$ |
| acyl | H | $CH_3$ | SH | NH-cyclopropyl |
| acyl | H | $CH_3$ | SH | NH-methyl |
| acyl | H | $CH_3$ | SH | NH-ethyl |
| acyl | H | $CH_3$ | SH | NH-acetyl |
| acyl | H | $CH_3$ | SH | OH |
| acyl | H | $CH_3$ | SH | OMe |
| acyl | H | $CH_3$ | SH | OEt |
| acyl | H | $CH_3$ | SH | O-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | $CH_3$ | SH | O-acetyl |
| acyl | H | $CH_3$ | SH | SH |
| acyl | H | $CH_3$ | SH | SMe |
| acyl | H | $CH_3$ | SH | SEt |
| acyl | H | $CH_3$ | SH | S-cyclopropyl |
| acyl | H | $CH_3$ | SH | F |
| acyl | H | $CH_3$ | SH | Cl |
| acyl | H | $CH_3$ | SH | Br |
| acyl | H | $CH_3$ | SH | I |
| acyl | acyl | $CH_3$ | SH | H |
| acyl | acyl | $CH_3$ | SH | $NH_2$ |
| acyl | acyl | $CH_3$ | SH | NH-cyclopropyl |
| acyl | acyl | $CH_3$ | SH | NH-methyl |
| acyl | acyl | $CH_3$ | SH | NH-ethyl |
| acyl | acyl | $CH_3$ | SH | NH-acetyl |
| acyl | acyl | $CH_3$ | SH | OH |
| acyl | acyl | $CH_3$ | SH | OMe |
| acyl | acyl | $CH_3$ | SH | OEt |
| acyl | acyl | $CH_3$ | SH | O-cyclopropyl |
| acyl | acyl | $CH_3$ | SH | O-acetyl |
| acyl | acyl | $CH_3$ | SH | SH |
| acyl | acyl | $CH_3$ | SH | SMe |
| acyl | acyl | $CH_3$ | SH | SEt |
| acyl | acyl | $CH_3$ | SH | S-cyclopropyl |
| acyl | acyl | $CH_3$ | SH | F |
| acyl | acyl | $CH_3$ | SH | Cl |
| acyl | acyl | $CH_3$ | SH | Br |
| acyl | acyl | $CH_3$ | SH | I |
| acyl | amino acid | $CH_3$ | SH | H |
| acyl | amino acid | $CH_3$ | SH | $NH_2$ |
| acyl | amino acid | $CH_3$ | SH | NH-cyclopropyl |
| acyl | amino acid | $CH_3$ | SH | NH-methyl |
| acyl | amino acid | $CH_3$ | SH | NH-ethyl |
| acyl | amino acid | $CH_3$ | SH | NH-acetyl |
| acyl | amino acid | $CH_3$ | SH | OH |
| acyl | amino acid | $CH_3$ | SH | OMe |
| acyl | amino acid | $CH_3$ | SH | OEt |
| acyl | amino acid | $CH_3$ | SH | O-cyclopropyl |
| acyl | amino acid | $CH_3$ | SH | O-acetyl |
| acyl | amino acid | $CH_3$ | SH | SH |
| acyl | amino acid | $CH_3$ | SH | SMe |
| acyl | amino acid | $CH_3$ | SH | SEt |
| acyl | amino acid | $CH_3$ | SH | S-cyclopropyl |
| acyl | amino acid | $CH_3$ | SH | F |
| acyl | amino acid | $CH_3$ | SH | Cl |
| acyl | amino acid | $CH_3$ | SH | Br |
| acyl | amino acid | $CH_3$ | SH | I |
| H | acyl | $CH_3$ | SH | H |
| H | acyl | $CH_3$ | SH | $NH_2$ |
| H | acyl | $CH_3$ | SH | NH-cyclopropyl |
| H | acyl | $CH_3$ | SH | NH-methyl |
| H | acyl | $CH_3$ | SH | NH-ethyl |
| H | acyl | $CH_3$ | SH | NH-acetyl |
| H | acyl | $CH_3$ | SH | OH |
| H | acyl | $CH_3$ | SH | OMe |
| H | acyl | $CH_3$ | SH | OEt |
| H | acyl | $CH_3$ | SH | O-cyclopropyl |
| H | acyl | $CH_3$ | SH | O-acetyl |
| H | acyl | $CH_3$ | SH | SH |
| H | acyl | $CH_3$ | SH | SMe |
| H | acyl | $CH_3$ | SH | SEt |
| H | acyl | $CH_3$ | SH | S-cyclopropyl |
| H | acyl | $CH_3$ | SH | F |
| H | acyl | $CH_3$ | SH | Cl |
| H | acyl | $CH_3$ | SH | Br |
| H | acyl | $CH_3$ | SH | I |
| H | amino acid | $CH_3$ | SH | H |
| H | amino acid | $CH_3$ | SH | $NH_2$ |
| H | amino acid | $CH_3$ | SH | NH-cyclopropyl |
| H | amino acid | $CH_3$ | SH | NH-methyl |
| H | amino acid | $CH_3$ | SH | NH-ethyl |
| H | amino acid | $CH_3$ | SH | NH-acetyl |
| H | amino acid | $CH_3$ | SH | OH |
| H | amino acid | $CH_3$ | SH | OMe |
| H | amino acid | $CH_3$ | SH | OEt |
| H | amino acid | $CH_3$ | SH | O-cyclopropyl |
| H | amino acid | $CH_3$ | SH | O-acetyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | $CH_3$ | SH | SH |
| H | amino acid | $CH_3$ | SH | SMe |
| H | amino acid | $CH_3$ | SH | SEt |
| H | amino acid | $CH_3$ | SH | S-cyclopropyl |
| H | amino acid | $CH_3$ | SH | F |
| H | amino acid | $CH_3$ | SH | Cl |
| H | amino acid | $CH_3$ | SH | Br |
| H | amino acid | $CH_3$ | SH | I |
| amino acid | amino acid | $CH_3$ | SH | H |
| amino acid | amino acid | $CH_3$ | SH | $NH_2$ |
| amino acid | amino acid | $CH_3$ | SH | NH-cyclopropyl |
| amino acid | amino acid | $CH_3$ | SH | NH-methyl |
| amino acid | amino acid | $CH_3$ | SH | NH-ethyl |
| amino acid | amino acid | $CH_3$ | SH | NH-acetyl |
| amino acid | amino acid | $CH_3$ | SH | OH |
| amino acid | amino acid | $CH_3$ | SH | OMe |
| amino acid | amino acid | $CH_3$ | SH | OEt |
| amino acid | amino acid | $CH_3$ | SH | O-cyclopropyl |
| amino acid | amino acid | $CH_3$ | SH | O-acetyl |
| amino acid | amino acid | $CH_3$ | SH | SH |
| amino acid | amino acid | $CH_3$ | SH | SMe |
| amino acid | amino acid | $CH_3$ | SH | SEt |
| amino acid | amino acid | $CH_3$ | SH | S-cyclopropyl |
| amino acid | amino acid | $CH_3$ | SH | F |
| amino acid | amino acid | $CH_3$ | SH | Cl |
| amino acid | amino acid | $CH_3$ | SH | Br |
| amino acid | amino acid | $CH_3$ | SH | I |
| amino acid | H | $CH_3$ | SH | H |
| amino acid | H | $CH_3$ | SH | $NH_2$ |
| amino acid | H | $CH_3$ | SH | NH-cyclopropyl |
| amino acid | H | $CH_3$ | SH | NH-methyl |
| amino acid | H | $CH_3$ | SH | NH-ethyl |
| amino acid | H | $CH_3$ | SH | NH-acetyl |
| amino acid | H | $CH_3$ | SH | OH |
| amino acid | H | $CH_3$ | SH | OMe |
| amino acid | H | $CH_3$ | SH | OEt |
| amino acid | H | $CH_3$ | SH | O-cyclopropyl |
| amino acid | H | $CH_3$ | SH | O-acetyl |
| amino acid | H | $CH_3$ | SH | SH |
| amino acid | H | $CH_3$ | SH | SMe |
| amino acid | H | $CH_3$ | SH | SEt |
| amino acid | H | $CH_3$ | SH | S-cyclopropyl |
| amino acid | H | $CH_3$ | SH | F |
| amino acid | H | $CH_3$ | SH | Cl |
| amino acid | H | $CH_3$ | SH | Br |
| amino acid | H | $CH_3$ | SH | I |
| amino acid | acyl | $CH_3$ | SH | H |
| amino acid | acyl | $CH_3$ | SH | $NH_2$ |
| amino acid | acyl | $CH_3$ | SH | NH-cyclopropyl |
| amino acid | acyl | $CH_3$ | SH | NH-methyl |
| amino acid | acyl | $CH_3$ | SH | NH-ethyl |
| amino acid | acyl | $CH_3$ | SH | NH-acetyl |
| amino acid | acyl | $CH_3$ | SH | OH |
| amino acid | acyl | $CH_3$ | SH | OMe |
| amino acid | acyl | $CH_3$ | SH | OEt |
| amino acid | acyl | $CH_3$ | SH | O-cyclopropyl |
| amino acid | acyl | $CH_3$ | SH | O-acetyl |
| amino acid | acyl | $CH_3$ | SH | SH |
| amino acid | acyl | $CH_3$ | SH | SMe |
| amino acid | acyl | $CH_3$ | SH | SEt |
| amino acid | acyl | $CH_3$ | SH | S-cyclopropyl |
| amino acid | acyl | $CH_3$ | SH | F |
| amino acid | acyl | $CH_3$ | SH | Cl |
| amino acid | acyl | $CH_3$ | SH | Br |
| amino acid | acyl | $CH_3$ | SH | I |
| acyl | H | $CF_3$ | SH | H |
| acyl | H | $CF_3$ | SH | $NH_2$ |
| acyl | H | $CF_3$ | SH | NH-cyclopropyl |
| acyl | H | $CF_3$ | SH | NH-methyl |
| acyl | H | $CF_3$ | SH | NH-ethyl |
| acyl | H | $CF_3$ | SH | NH-acetyl |
| acyl | H | $CF_3$ | SH | OH |
| acyl | H | $CF_3$ | SH | OMe |
| acyl | H | $CF_3$ | SH | OEt |
| acyl | H | $CF_3$ | SH | O-cyclopropyl |
| acyl | H | $CF_3$ | SH | O-acetyl |
| acyl | H | $CF_3$ | SH | SH |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | $CF_3$ | SH | SMe |
| acyl | H | $CF_3$ | SH | SEt |
| acyl | H | $CF_3$ | SH | S-cyclopropyl |
| acyl | H | $CF_3$ | SH | F |
| acyl | H | $CF_3$ | SH | Cl |
| acyl | H | $CF_3$ | SH | Br |
| acyl | H | $CF_3$ | SH | I |
| acyl | acyl | $CF_3$ | SH | H |
| acyl | acyl | $CF_3$ | SH | $NH_2$ |
| acyl | acyl | $CF_3$ | SH | NH-cyclopropyl |
| acyl | acyl | $CF_3$ | SH | NH-methyl |
| acyl | acyl | $CF_3$ | SH | NH-ethyl |
| acyl | acyl | $CF_3$ | SH | NH-acetyl |
| acyl | acyl | $CF_3$ | SH | OH |
| acyl | acyl | $CF_3$ | SH | OMe |
| acyl | acyl | $CF_3$ | SH | OEt |
| acyl | acyl | $CF_3$ | SH | O-cyclopropyl |
| acyl | acyl | $CF_3$ | SH | O-acetyl |
| acyl | acyl | $CF_3$ | SH | SH |
| acyl | acyl | $CF_3$ | SH | SMe |
| acyl | acyl | $CF_3$ | SH | SEt |
| acyl | acyl | $CF_3$ | SH | S-cyclopropyl |
| acyl | acyl | $CF_3$ | SH | F |
| acyl | acyl | $CF_3$ | SH | Cl |
| acyl | acyl | $CF_3$ | SH | Br |
| acyl | acyl | $CF_3$ | SH | I |
| acyl | amino acid | $CF_3$ | SH | H |
| acyl | amino acid | $CF_3$ | SH | $NH_2$ |
| acyl | amino acid | $CF_3$ | SH | NH-cyclopropyl |
| acyl | amino acid | $CF_3$ | SH | NH-methyl |
| acyl | amino acid | $CF_3$ | SH | NH-ethyl |
| acyl | amino acid | $CF_3$ | SH | NH-acetyl |
| acyl | amino acid | $CF_3$ | SH | OH |
| acyl | amino acid | $CF_3$ | SH | OMe |
| acyl | amino acid | $CF_3$ | SH | OEt |
| acyl | amino acid | $CF_3$ | SH | O-cyclopropyl |
| acyl | amino acid | $CF_3$ | SH | O-acetyl |
| acyl | amino acid | $CF_3$ | SH | SH |
| acyl | amino acid | $CF_3$ | SH | SMe |
| acyl | amino acid | $CF_3$ | SH | SEt |
| acyl | amino acid | $CF_3$ | SH | S-cyclopropyl |
| acyl | amino acid | $CF_3$ | SH | F |
| acyl | amino acid | $CF_3$ | SH | Cl |
| acyl | amino acid | $CF_3$ | SH | Br |
| acyl | amino acid | $CF_3$ | SH | I |
| H | acyl | $CF_3$ | SH | H |
| H | acyl | $CF_3$ | SH | $NH_2$ |
| H | acyl | $CF_3$ | SH | NH-cyclopropyl |
| H | acyl | $CF_3$ | SH | NH-methyl |
| H | acyl | $CF_3$ | SH | NH-ethyl |
| H | acyl | $CF_3$ | SH | NH-acetyl |
| H | acyl | $CF_3$ | SH | OH |
| H | acyl | $CF_3$ | SH | OMe |
| H | acyl | $CF_3$ | SH | OEt |
| H | acyl | $CF_3$ | SH | O-cyclopropyl |
| H | acyl | $CF_3$ | SH | O-acetyl |
| H | acyl | $CF_3$ | SH | SH |
| H | acyl | $CF_3$ | SH | SMe |
| H | acyl | $CF_3$ | SH | SEt |
| H | acyl | $CF_3$ | SH | S-cyclopropyl |
| H | acyl | $CF_3$ | SH | F |
| H | acyl | $CF_3$ | SH | Cl |
| H | acyl | $CF_3$ | SH | Br |
| H | acyl | $CF_3$ | SH | I |
| H | amino acid | $CF_3$ | SH | H |
| H | amino acid | $CF_3$ | SH | $NH_2$ |
| H | amino acid | $CF_3$ | SH | NH-cyclopropyl |
| H | amino acid | $CF_3$ | SH | NH-methyl |
| H | amino acid | $CF_3$ | SH | NH-ethyl |
| H | amino acid | $CF_3$ | SH | NH-acetyl |
| H | amino acid | $CF_3$ | SH | OH |
| H | amino acid | $CF_3$ | SH | OMe |
| H | amino acid | $CF_3$ | SH | OEt |
| H | amino acid | $CF_3$ | SH | O-cyclopropyl |
| H | amino acid | $CF_3$ | SH | O-acetyl |
| H | amino acid | $CF_3$ | SH | SH |
| H | amino acid | $CF_3$ | SH | SMe |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | $CF_3$ | SH | SEt |
| H | amino acid | $CF_3$ | SH | S-cyclopropyl |
| H | amino acid | $CF_3$ | SH | F |
| H | amino acid | $CF_3$ | SH | Cl |
| H | amino acid | $CF_3$ | SH | Br |
| H | amino acid | $CF_3$ | SH | I |
| amino acid | amino acid | $CF_3$ | SH | H |
| amino acid | amino acid | $CF_3$ | SH | $NH_2$ |
| amino acid | amino acid | $CF_3$ | SH | NH-cyclopropyl |
| amino acid | amino acid | $CF_3$ | SH | NH-methyl |
| amino acid | amino acid | $CF_3$ | SH | NH-ethyl |
| amino acid | amino acid | $CF_3$ | SH | NH-acetyl |
| amino acid | amino acid | $CF_3$ | SH | OH |
| amino acid | amino acid | $CF_3$ | SH | OMe |
| amino acid | amino acid | $CF_3$ | SH | OEt |
| amino acid | amino acid | $CF_3$ | SH | O-cyclopropyl |
| amino acid | amino acid | $CF_3$ | SH | O-acetyl |
| amino acid | amino acid | $CF_3$ | SH | SH |
| amino acid | amino acid | $CF_3$ | SH | SMe |
| amino acid | amino acid | $CF_3$ | SH | SEt |
| amino acid | amino acid | $CF_3$ | SH | S-cyclopropyl |
| amino acid | amino acid | $CF_3$ | SH | F |
| amino acid | amino acid | $CF_3$ | SH | Cl |
| amino acid | amino acid | $CF_3$ | SH | Br |
| amino acid | amino acid | $CF_3$ | SH | I |
| amino acid | H | $CF_3$ | SH | H |
| amino acid | H | $CF_3$ | SH | $NH_2$ |
| amino acid | H | $CF_3$ | SH | NH-cyclopropyl |
| amino acid | H | $CF_3$ | SH | NH-methyl |
| amino acid | H | $CF_3$ | SH | NH-ethyl |
| amino acid | H | $CF_3$ | SH | NH-acetyl |
| amino acid | H | $CF_3$ | SH | OH |
| amino acid | H | $CF_3$ | SH | OMe |
| amino acid | H | $CF_3$ | SH | OEt |
| amino acid | H | $CF_3$ | SH | O-cyclopropyl |
| amino acid | H | $CF_3$ | SH | O-acetyl |
| amino acid | H | $CF_3$ | SH | SH |
| amino acid | H | $CF_3$ | SH | SMe |
| amino acid | H | $CF_3$ | SH | SEt |
| amino acid | H | $CF_3$ | SH | S-cyclopropyl |
| amino acid | H | $CF_3$ | SH | F |
| amino acid | H | $CF_3$ | SH | Cl |
| amino acid | H | $CF_3$ | SH | Br |
| amino acid | H | $CF_3$ | SH | I |
| amino acid | acyl | $CF_3$ | SH | H |
| amino acid | acyl | $CF_3$ | SH | $NH_2$ |
| amino acid | acyl | $CF_3$ | SH | NH-cyclopropyl |
| amino acid | acyl | $CF_3$ | SH | NH-methyl |
| amino acid | acyl | $CF_3$ | SH | NH-ethyl |
| amino acid | acyl | $CF_3$ | SH | NH-acetyl |
| amino acid | acyl | $CF_3$ | SH | OH |
| amino acid | acyl | $CF_3$ | SH | OMe |
| amino acid | acyl | $CF_3$ | SH | OEt |
| amino acid | acyl | $CF_3$ | SH | O-cyclopropyl |
| amino acid | acyl | $CF_3$ | SH | O-acetyl |
| amino acid | acyl | $CF_3$ | SH | SH |
| amino acid | acyl | $CF_3$ | SH | SMe |
| amino acid | acyl | $CF_3$ | SH | SEt |
| amino acid | acyl | $CF_3$ | SH | S-cyclopropyl |
| amino acid | acyl | $CF_3$ | SH | F |
| amino acid | acyl | $CF_3$ | SH | Cl |
| amino acid | acyl | $CF_3$ | SH | Br |
| amino acid | acyl | $CF_3$ | SH | I |
| acyl | H | Br | SH | H |
| acyl | H | Br | SH | $NH_2$ |
| acyl | H | Br | SH | NH-cyclopropyl |
| acyl | H | Br | SH | NH-methyl |
| acyl | H | Br | SH | NH-ethyl |
| acyl | H | Br | SH | NH-acetyl |
| acyl | H | Br | SH | OH |
| acyl | H | Br | SH | OMe |
| acyl | H | Br | SH | OEt |
| acyl | H | Br | SH | O-cyclopropyl |
| acyl | H | Br | SH | O-acetyl |
| acyl | H | Br | SH | SH |
| acyl | H | Br | SH | SMe |
| acyl | H | Br | SH | SEt |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | Br | SH | S-cyclopropyl |
| acyl | H | Br | SH | F |
| acyl | H | Br | SH | Cl |
| acyl | H | Br | SH | Br |
| acyl | H | Br | SH | I |
| acyl | acyl | Br | SH | H |
| acyl | acyl | Br | SH | $NH_2$ |
| acyl | acyl | Br | SH | NH-cyclopropyl |
| acyl | acyl | Br | SH | NH-methyl |
| acyl | acyl | Br | SH | NH-ethyl |
| acyl | acyl | Br | SH | NH-acetyl |
| acyl | acyl | Br | SH | OH |
| acyl | acyl | Br | SH | OMe |
| acyl | acyl | Br | SH | OEt |
| acyl | acyl | Br | SH | O-cyclopropyl |
| acyl | acyl | Br | SH | O-acetyl |
| acyl | acyl | Br | SH | SH |
| acyl | acyl | Br | SH | SMe |
| acyl | acyl | Br | SH | SEt |
| acyl | acyl | Br | SH | S-cyclopropyl |
| acyl | acyl | Br | SH | F |
| acyl | acyl | Br | SH | Cl |
| acyl | acyl | Br | SH | Br |
| acyl | acyl | Br | SH | I |
| acyl | amino acid | Br | SH | H |
| acyl | amino acid | Br | SH | $NH_2$ |
| acyl | amino acid | Br | SH | NH-cyclopropyl |
| acyl | amino acid | Br | SH | NH-methyl |
| acyl | amino acid | Br | SH | NH-ethyl |
| acyl | amino acid | Br | SH | NH-acetyl |
| acyl | amino acid | Br | SH | OH |
| acyl | amino acid | Br | SH | OMe |
| acyl | amino acid | Br | SH | OEt |
| acyl | amino acid | Br | SH | O-cyclopropyl |
| acyl | amino acid | Br | SH | O-acetyl |
| acyl | amino acid | Br | SH | SH |
| acyl | amino acid | Br | SH | SMe |
| acyl | amino acid | Br | SH | SEt |
| acyl | amino acid | Br | SH | S-cyclopropyl |
| acyl | amino acid | Br | SH | F |
| acyl | amino acid | Br | SH | Cl |
| acyl | amino acid | Br | SH | Br |
| acyl | amino acid | Br | SH | I |
| H | acyl | Br | SH | H |
| H | acyl | Br | SH | $NH_2$ |
| H | acyl | Br | SH | NH-cyclopropyl |
| H | acyl | Br | SH | NH-methyl |
| H | acyl | Br | SH | NH-ethyl |
| H | acyl | Br | SH | NH-acetyl |
| H | acyl | Br | SH | OH |
| H | acyl | Br | SH | OMe |
| H | acyl | Br | SH | OEt |
| H | acyl | Br | SH | O-cyclopropyl |
| H | acyl | Br | SH | O-acetyl |
| H | acyl | Br | SH | SH |
| H | acyl | Br | SH | SMe |
| H | acyl | Br | SH | SEt |
| H | acyl | Br | SH | S-cyclopropyl |
| H | acyl | Br | SH | F |
| H | acyl | Br | SH | Cl |
| H | acyl | Br | SH | Br |
| H | acyl | Br | SH | I |
| H | amino acid | Br | SH | H |
| H | amino acid | Br | SH | $NH_2$ |
| H | amino acid | Br | SH | NH-cyclopropyl |
| H | amino acid | Br | SH | NH-methyl |
| H | amino acid | Br | SH | NH-ethyl |
| H | amino acid | Br | SH | NH-acetyl |
| H | amino acid | Br | SH | OH |
| H | amino acid | Br | SH | OMe |
| H | amino acid | Br | SH | OEt |
| H | amino acid | Br | SH | O-cyclopropyl |
| H | amino acid | Br | SH | O-acetyl |
| H | amino acid | Br | SH | SH |
| H | amino acid | Br | SH | SMe |
| H | amino acid | Br | SH | SEt |
| H | amino acid | Br | SH | S-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | Br | SH | F |
| H | amino acid | Br | SH | Cl |
| H | amino acid | Br | SH | Br |
| H | amino acid | Br | SH | I |
| amino acid | amino acid | Br | SH | H |
| amino acid | amino acid | Br | SH | $NH_2$ |
| amino acid | amino acid | Br | SH | NH-cyclopropyl |
| amino acid | amino acid | Br | SH | NH-methyl |
| amino acid | amino acid | Br | SH | NH-ethyl |
| amino acid | amino acid | Br | SH | NH-acetyl |
| amino acid | amino acid | Br | SH | OH |
| amino acid | amino acid | Br | SH | OMe |
| amino acid | amino acid | Br | SH | OEt |
| amino acid | amino acid | Br | SH | O-cyclopropyl |
| amino acid | amino acid | Br | SH | O-acetyl |
| amino acid | amino acid | Br | SH | SH |
| amino acid | amino acid | Br | SH | SMe |
| amino acid | amino acid | Br | SH | SEt |
| amino acid | amino acid | Br | SH | S-cyclopropyl |
| amino acid | amino acid | Br | SH | F |
| amino acid | amino acid | Br | SH | Cl |
| amino acid | amino acid | Br | SH | Br |
| amino acid | amino acid | Br | SH | I |
| amino acid | H | Br | SH | H |
| amino acid | H | Br | SH | $NH_2$ |
| amino acid | H | Br | SH | NH-cyclopropyl |
| amino acid | H | Br | SH | NH-methyl |
| amino acid | H | Br | SH | NH-ethyl |
| amino acid | H | Br | SH | NH-acetyl |
| amino acid | H | Br | SH | OH |
| amino acid | H | Br | SH | OMe |
| amino acid | H | Br | SH | OEt |
| amino acid | H | Br | SH | O-cyclopropyl |
| amino acid | H | Br | SH | O-acetyl |
| amino acid | H | Br | SH | SH |
| amino acid | H | Br | SH | SMe |
| amino acid | H | Br | SH | SEt |
| amino acid | H | Br | SH | S-cyclopropyl |
| amino acid | H | Br | SH | F |
| amino acid | H | Br | SH | Cl |
| amino acid | H | Br | SH | Br |
| amino acid | H | Br | SH | I |
| amino acid | acyl | Br | SH | H |
| amino acid | acyl | Br | SH | $NH_2$ |
| amino acid | acyl | Br | SH | NH-cyclopropyl |
| amino acid | acyl | Br | SH | NH-methyl |
| amino acid | acyl | Br | SH | NH-ethyl |
| amino acid | acyl | Br | SH | NH-acetyl |
| amino acid | acyl | Br | SH | OH |
| amino acid | acyl | Br | SH | OMe |
| amino acid | acyl | Br | SH | OEt |
| amino acid | acyl | Br | SH | O-cyclopropyl |
| amino acid | acyl | Br | SH | O-acetyl |
| amino acid | acyl | Br | SH | SH |
| amino acid | acyl | Br | SH | SMe |
| amino acid | acyl | Br | SH | SEt |
| amino acid | acyl | Br | SH | S-cyclopropyl |
| amino acid | acyl | Br | SH | F |
| amino acid | acyl | Br | SH | Cl |
| amino acid | acyl | Br | SH | Br |
| amino acid | acyl | Br | SH | I |
| acyl | H | Cl | SH | H |
| acyl | H | Cl | SH | $NH_2$ |
| acyl | H | Cl | SH | NH-cyclopropyl |
| acyl | H | Cl | SH | NH-methyl |
| acyl | H | Cl | SH | NH-ethyl |
| acyl | H | Cl | SH | NH-acetyl |
| acyl | H | Cl | SH | OH |
| acyl | H | Cl | SH | OMe |
| acyl | H | Cl | SH | OEt |
| acyl | H | Cl | SH | O-cyclopropyl |
| acyl | H | Cl | SH | O-acetyl |
| acyl | H | Cl | SH | SH |
| acyl | H | Cl | SH | SMe |
| acyl | H | Cl | SH | SEt |
| acyl | H | Cl | SH | S-cyclopropyl |
| acyl | H | Cl | SH | F |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | Cl | SH | Cl |
| acyl | H | Cl | SH | Br |
| acyl | H | Cl | SH | I |
| acyl | acyl | Cl | SH | H |
| acyl | acyl | Cl | SH | $NH_2$ |
| acyl | acyl | Cl | SH | NH-cyclopropyl |
| acyl | acyl | Cl | SH | NH-methyl |
| acyl | acyl | Cl | SH | NH-ethyl |
| acyl | acyl | Cl | SH | NH-acetyl |
| acyl | acyl | Cl | SH | OH |
| acyl | acyl | Cl | SH | OMe |
| acyl | acyl | Cl | SH | OEt |
| acyl | acyl | Cl | SH | O-cyclopropyl |
| acyl | acyl | Cl | SH | O-acetyl |
| acyl | acyl | Cl | SH | SH |
| acyl | acyl | Cl | SH | SMe |
| acyl | acyl | Cl | SH | SEt |
| acyl | acyl | Cl | SH | S-cyclopropyl |
| acyl | acyl | Cl | SH | F |
| acyl | acyl | Cl | SH | Cl |
| acyl | acyl | Cl | SH | Br |
| acyl | acyl | Cl | SH | I |
| acyl | amino acid | Cl | SH | H |
| acyl | amino acid | Cl | SH | $NH_2$ |
| acyl | amino acid | Cl | SH | NH-cyclopropyl |
| acyl | amino acid | Cl | SH | NH-methyl |
| acyl | amino acid | Cl | SH | NH-ethyl |
| acyl | amino acid | Cl | SH | NH-acetyl |
| acyl | amino acid | Cl | SH | OH |
| acyl | amino acid | Cl | SH | OMe |
| acyl | amino acid | Cl | SH | OEt |
| acyl | amino acid | Cl | SH | O-cyclopropyl |
| acyl | amino acid | Cl | SH | O-acetyl |
| acyl | amino acid | Cl | SH | SH |
| acyl | amino acid | Cl | SH | SMe |
| acyl | amino acid | Cl | SH | SEt |
| acyl | amino acid | Cl | SH | S-cyclopropyl |
| acyl | amino acid | Cl | SH | F |
| acyl | amino acid | Cl | SH | Cl |
| acyl | amino acid | Cl | SH | Br |
| acyl | amino acid | Cl | SH | I |
| H | acyl | Cl | SH | H |
| H | acyl | Cl | SH | $NH_2$ |
| H | acyl | Cl | SH | NH-cyclopropyl |
| H | acyl | Cl | SH | NH-methyl |
| H | acyl | Cl | SH | NH-ethyl |
| H | acyl | Cl | SH | NH-acetyl |
| H | acyl | Cl | SH | OH |
| H | acyl | Cl | SH | OMe |
| H | acyl | Cl | SH | OEt |
| H | acyl | Cl | SH | O-cyclopropyl |
| H | acyl | Cl | SH | O-acetyl |
| H | acyl | Cl | SH | SH |
| H | acyl | Cl | SH | SMe |
| H | acyl | Cl | SH | SEt |
| H | acyl | Cl | SH | S-cyclopropyl |
| H | acyl | Cl | SH | F |
| H | acyl | Cl | SH | Cl |
| H | acyl | Cl | SH | Br |
| H | acyl | Cl | SH | I |
| H | amino acid | Cl | SH | H |
| H | amino acid | Cl | SH | $NH_2$ |
| H | amino acid | Cl | SH | NH-cyclopropyl |
| H | amino acid | Cl | SH | NH-methyl |
| H | amino acid | Cl | SH | NH-ethyl |
| H | amino acid | Cl | SH | NH-acetyl |
| H | amino acid | Cl | SH | OH |
| H | amino acid | Cl | SH | OMe |
| H | amino acid | Cl | SH | OEt |
| H | amino acid | Cl | SH | O-cyclopropyl |
| H | amino acid | Cl | SH | O-acetyl |
| H | amino acid | Cl | SH | SH |
| H | amino acid | Cl | SH | SMe |
| H | amino acid | Cl | SH | SEt |
| H | amino acid | Cl | SH | S-cyclopropyl |
| H | amino acid | Cl | SH | F |
| H | amino acid | Cl | SH | Cl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | Cl | SH | Br |
| H | amino acid | Cl | SH | I |
| amino acid | amino acid | Cl | SH | H |
| amino acid | amino acid | Cl | SH | $NH_2$ |
| amino acid | amino acid | Cl | SH | NH-cyclopropyl |
| amino acid | amino acid | Cl | SH | NH-methyl |
| amino acid | amino acid | Cl | SH | NH-ethyl |
| amino acid | amino acid | Cl | SH | NH-acetyl |
| amino acid | amino acid | Cl | SH | OH |
| amino acid | amino acid | Cl | SH | OMe |
| amino acid | amino acid | Cl | SH | OEt |
| amino acid | amino acid | Cl | SH | O-cyclopropyl |
| amino acid | amino acid | Cl | SH | O-acetyl |
| amino acid | amino acid | Cl | SH | SH |
| amino acid | amino acid | Cl | SH | SMe |
| amino acid | amino acid | Cl | SH | SEt |
| amino acid | amino acid | Cl | SH | S-cyclopropyl |
| amino acid | amino acid | Cl | SH | F |
| amino acid | amino acid | Cl | SH | Cl |
| amino acid | amino acid | Cl | SH | Br |
| amino acid | amino acid | Cl | SH | I |
| amino acid | H | Cl | SH | H |
| amino acid | H | Cl | SH | $NH_2$ |
| amino acid | H | Cl | SH | NH-cyclopropyl |
| amino acid | H | Cl | SH | NH-methyl |
| amino acid | H | Cl | SH | NH-ethyl |
| amino acid | H | Cl | SH | NH-acetyl |
| amino acid | H | Cl | SH | OH |
| amino acid | H | Cl | SH | OMe |
| amino acid | H | Cl | SH | OEt |
| amino acid | H | Cl | SH | O-cyclopropyl |
| amino acid | H | Cl | SH | O-acetyl |
| amino acid | H | Cl | SH | SH |
| amino acid | H | Cl | SH | SMe |
| amino acid | H | Cl | SH | SEt |
| amino acid | H | Cl | SH | S-cyclopropyl |
| amino acid | H | Cl | SH | F |
| amino acid | H | Cl | SH | Cl |
| amino acid | H | Cl | SH | Br |
| amino acid | H | Cl | SH | I |
| amino acid | acyl | Cl | SH | H |
| amino acid | acyl | Cl | SH | $NH_2$ |
| amino acid | acyl | Cl | SH | NH-cyclopropyl |
| amino acid | acyl | Cl | SH | NH-methyl |
| amino acid | acyl | Cl | SH | NH-ethyl |
| amino acid | acyl | Cl | SH | NH-acetyl |
| amino acid | acyl | Cl | SH | OH |
| amino acid | acyl | Cl | SH | OMe |
| amino acid | acyl | Cl | SH | OEt |
| amino acid | acyl | Cl | SH | O-cyclopropyl |
| amino acid | acyl | Cl | SH | O-acetyl |
| amino acid | acyl | Cl | SH | SH |
| amino acid | acyl | Cl | SH | SMe |
| amino acid | acyl | Cl | SH | SEt |
| amino acid | acyl | Cl | SH | S-cyclopropyl |
| amino acid | acyl | Cl | SH | F |
| amino acid | acyl | Cl | SH | Cl |
| amino acid | acyl | Cl | SH | Br |
| amino acid | acyl | Cl | SH | I |
| acyl | H | F | SH | H |
| acyl | H | F | SH | $NH_2$ |
| acyl | H | F | SH | NH-cyclopropyl |
| acyl | H | F | SH | NH-methyl |
| acyl | H | F | SH | NH-ethyl |
| acyl | H | F | SH | NH-acetyl |
| acyl | H | F | SH | OH |
| acyl | H | F | SH | OMe |
| acyl | H | F | SH | OEt |
| acyl | H | F | SH | O-cyclopropyl |
| acyl | H | F | SH | O-acetyl |
| acyl | H | F | SH | SH |
| acyl | H | F | SH | SMe |
| acyl | H | F | SH | SEt |
| acyl | H | F | SH | S-cyclopropyl |
| acyl | H | F | SH | F |
| acyl | H | F | SH | Cl |
| acyl | H | F | SH | Br |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | F | SH | I |
| acyl | acyl | F | SH | H |
| acyl | acyl | F | SH | $NH_2$ |
| acyl | acyl | F | SH | NH-cyclopropyl |
| acyl | acyl | F | SH | NH-methyl |
| acyl | acyl | F | SH | NH-ethyl |
| acyl | acyl | F | SH | NH-acetyl |
| acyl | acyl | F | SH | OH |
| acyl | acyl | F | SH | OMe |
| acyl | acyl | F | SH | OEt |
| acyl | acyl | F | SH | O-cyclopropyl |
| acyl | acyl | F | SH | O-acetyl |
| acyl | acyl | F | SH | SH |
| acyl | acyl | F | SH | SMe |
| acyl | acyl | F | SH | SEt |
| acyl | acyl | F | SH | S-cyclopropyl |
| acyl | acyl | F | SH | F |
| acyl | acyl | F | SH | Cl |
| acyl | acyl | F | SH | Br |
| acyl | acyl | F | SH | I |
| acyl | amino acid | F | SH | H |
| acyl | amino acid | F | SH | $NH_2$ |
| acyl | amino acid | F | SH | NH-cyclopropyl |
| acyl | amino acid | F | SH | NH-methyl |
| acyl | amino acid | F | SH | NH-ethyl |
| acyl | amino acid | F | SH | NH-acetyl |
| acyl | amino acid | F | SH | OH |
| acyl | amino acid | F | SH | OMe |
| acyl | amino acid | F | SH | OEt |
| acyl | amino acid | F | SH | O-cyclopropyl |
| acyl | amino acid | F | SH | O-acetyl |
| acyl | amino acid | F | SH | SH |
| acyl | amino acid | F | SH | SMe |
| acyl | amino acid | F | SH | SEt |
| acyl | amino acid | F | SH | S-cyclopropyl |
| acyl | amino acid | F | SH | F |
| acyl | amino acid | F | SH | Cl |
| acyl | amino acid | F | SH | Br |
| acyl | amino acid | F | SH | I |
| H | acyl | F | SH | H |
| H | acyl | F | SH | $NH_2$ |
| H | acyl | F | SH | NH-cyclopropyl |
| H | acyl | F | SH | NH-methyl |
| H | acyl | F | SH | NH-ethyl |
| H | acyl | F | SH | NH-acetyl |
| H | acyl | F | SH | OH |
| H | acyl | F | SH | OMe |
| H | acyl | F | SH | OEt |
| H | acyl | F | SH | O-cyclopropyl |
| H | acyl | F | SH | O-acetyl |
| H | acyl | F | SH | SH |
| H | acyl | F | SH | SMe |
| H | acyl | F | SH | SEt |
| H | acyl | F | SH | S-cyclopropyl |
| H | acyl | F | SH | F |
| H | acyl | F | SH | Cl |
| H | acyl | F | SH | Br |
| H | acyl | F | SH | I |
| H | amino acid | F | SH | H |
| H | amino acid | F | SH | $NH_2$ |
| H | amino acid | F | SH | NH-cyclopropyl |
| H | amino acid | F | SH | NH-methyl |
| H | amino acid | F | SH | NH-ethyl |
| H | amino acid | F | SH | NH-acetyl |
| H | amino acid | F | SH | OH |
| H | amino acid | F | SH | OMe |
| H | amino acid | F | SH | OEt |
| H | amino acid | F | SH | O-cyclopropyl |
| H | amino acid | F | SH | O-acetyl |
| H | amino acid | F | SH | SH |
| H | amino acid | F | SH | SMe |
| H | amino acid | F | SH | SEt |
| H | amino acid | F | SH | S-cyclopropyl |
| H | amino acid | F | SH | F |
| H | amino acid | F | SH | Cl |
| H | amino acid | F | SH | Br |
| H | amino acid | F | SH | I |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | F | SH | H |
| amino acid | amino acid | F | SH | $NH_2$ |
| amino acid | amino acid | F | SH | NH-cyclopropyl |
| amino acid | amino acid | F | SH | NH-methyl |
| amino acid | amino acid | F | SH | NH-ethyl |
| amino acid | amino acid | F | SH | NH-acetyl |
| amino acid | amino acid | F | SH | OH |
| amino acid | amino acid | F | SH | OMe |
| amino acid | amino acid | F | SH | OEt |
| amino acid | amino acid | F | SH | O-cyclopropyl |
| amino acid | amino acid | F | SH | O-acetyl |
| amino acid | amino acid | F | SH | SH |
| amino acid | amino acid | F | SH | SMe |
| amino acid | amino acid | F | SH | SEt |
| amino acid | amino acid | F | SH | S-cyclopropyl |
| amino acid | amino acid | F | SH | F |
| amino acid | amino acid | F | SH | Cl |
| amino acid | amino acid | F | SH | Br |
| amino acid | amino acid | F | SH | I |
| amino acid | H | F | SH | H |
| amino acid | H | F | SH | $NH_2$ |
| amino acid | H | F | SH | NH-cyclopropyl |
| amino acid | H | F | SH | NH-methyl |
| amino acid | H | F | SH | NH-ethyl |
| amino acid | H | F | SH | NH-acetyl |
| amino acid | H | F | SH | OH |
| amino acid | H | F | SH | OMe |
| amino acid | H | F | SH | OEt |
| amino acid | H | F | SH | O-cyclopropyl |
| amino acid | H | F | SH | O-acetyl |
| amino acid | H | F | SH | SH |
| amino acid | H | F | SH | SMe |
| amino acid | H | F | SH | SEt |
| amino acid | H | F | SH | S-cyclopropyl |
| amino acid | H | F | SH | F |
| amino acid | H | F | SH | Cl |
| amino acid | H | F | SH | Br |
| amino acid | H | F | SH | I |
| amino acid | acyl | F | SH | H |
| amino acid | acyl | F | SH | $NH_2$ |
| amino acid | acyl | F | SH | NH-cyclopropyl |
| amino acid | acyl | F | SH | NH-methyl |
| amino acid | acyl | F | SH | NH-ethyl |
| amino acid | acyl | F | SH | NH-acetyl |
| amino acid | acyl | F | SH | OH |
| amino acid | acyl | F | SH | OMe |
| amino acid | acyl | F | SH | OEt |
| amino acid | acyl | F | SH | O-cyclopropyl |
| amino acid | acyl | F | SH | O-acetyl |
| amino acid | acyl | F | SH | SH |
| amino acid | acyl | F | SH | SMe |
| amino acid | acyl | F | SH | SEt |
| amino acid | acyl | F | SH | S-cyclopropyl |
| amino acid | acyl | F | SH | F |
| amino acid | acyl | F | SH | Cl |
| amino acid | acyl | F | SH | Br |
| amino acid | acyl | F | SH | I |
| acyl | H | $NH_2$ | SH | H |
| acyl | H | $NH_2$ | SH | $NH_2$ |
| acyl | H | $NH_2$ | SH | NH-cyclopropyl |
| acyl | H | $NH_2$ | SH | NH-methyl |
| acyl | H | $NH_2$ | SH | NH-ethyl |
| acyl | H | $NH_2$ | SH | NH-acetyl |
| acyl | H | $NH_2$ | SH | OH |
| acyl | H | $NH_2$ | SH | OMe |
| acyl | H | $NH_2$ | SH | OEt |
| acyl | H | $NH_2$ | SH | O-cyclopropyl |
| acyl | H | $NH_2$ | SH | O-acetyl |
| acyl | H | $NH_2$ | SH | SH |
| acyl | H | $NH_2$ | SH | SMe |
| acyl | H | $NH_2$ | SH | SEt |
| acyl | H | $NH_2$ | SH | S-cyclopropyl |
| acyl | H | $NH_2$ | SH | F |
| acyl | H | $NH_2$ | SH | Cl |
| acyl | H | $NH_2$ | SH | Br |
| acyl | H | $NH_2$ | SH | I |
| acyl | acyl | $NH_2$ | SH | H |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | $NH_2$ | SH | $NH_2$ |
| acyl | acyl | $NH_2$ | SH | NH-cyclopropyl |
| acyl | acyl | $NH_2$ | SH | NH-methyl |
| acyl | acyl | $NH_2$ | SH | NH-ethyl |
| acyl | acyl | $NH_2$ | SH | NH-acetyl |
| acyl | acyl | $NH_2$ | SH | OH |
| acyl | acyl | $NH_2$ | SH | OMe |
| acyl | acyl | $NH_2$ | SH | OEt |
| acyl | acyl | $NH_2$ | SH | O-cyclopropyl |
| acyl | acyl | $NH_2$ | SH | O-acetyl |
| acyl | acyl | $NH_2$ | SH | SH |
| acyl | acyl | $NH_2$ | SH | SMe |
| acyl | acyl | $NH_2$ | SH | SEt |
| acyl | acyl | $NH_2$ | SH | S-cyclopropyl |
| acyl | acyl | $NH_2$ | SH | F |
| acyl | acyl | $NH_2$ | SH | Cl |
| acyl | acyl | $NH_2$ | SH | Br |
| acyl | acyl | $NH_2$ | SH | I |
| acyl | amino acid | $NH_2$ | SH | H |
| acyl | amino acid | $NH_2$ | SH | $NH_2$ |
| acyl | amino acid | $NH_2$ | SH | NH-cyclopropyl |
| acyl | amino acid | $NH_2$ | SH | NH-methyl |
| acyl | amino acid | $NH_2$ | SH | NH-ethyl |
| acyl | amino acid | $NH_2$ | SH | NH-acetyl |
| acyl | amino acid | $NH_2$ | SH | OH |
| acyl | amino acid | $NH_2$ | SH | OMe |
| acyl | amino acid | $NH_2$ | SH | OEt |
| acyl | amino acid | $NH_2$ | SH | O-cyclopropyl |
| acyl | amino acid | $NH_2$ | SH | O-acetyl |
| acyl | amino acid | $NH_2$ | SH | SH |
| acyl | amino acid | $NH_2$ | SH | SMe |
| acyl | amino acid | $NH_2$ | SH | SEt |
| acyl | amino acid | $NH_2$ | SH | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | SH | F |
| acyl | amino acid | $NH_2$ | SH | Cl |
| acyl | amino acid | $NH_2$ | SH | Br |
| acyl | amino acid | $NH_2$ | SH | I |
| H | acyl | $NH_2$ | SH | H |
| H | acyl | $NH_2$ | SH | $NH_2$ |
| H | acyl | $NH_2$ | SH | NH-cyclopropyl |
| H | acyl | $NH_2$ | SH | NH-methyl |
| H | acyl | $NH_2$ | SH | NH-ethyl |
| H | acyl | $NH_2$ | SH | NH-acetyl |
| H | acyl | $NH_2$ | SH | OH |
| H | acyl | $NH_2$ | SH | OMe |
| H | acyl | $NH_2$ | SH | OEt |
| H | acyl | $NH_2$ | SH | O-cyclopropyl |
| H | acyl | $NH_2$ | SH | O-acetyl |
| H | acyl | $NH_2$ | SH | SH |
| H | acyl | $NH_2$ | SH | SMe |
| H | acyl | $NH_2$ | SH | SEt |
| H | acyl | $NH_2$ | SH | S-cyclopropyl |
| H | acyl | $NH_2$ | SH | F |
| H | acyl | $NH_2$ | SH | Cl |
| H | acyl | $NH_2$ | SH | Br |
| H | acyl | $NH_2$ | SH | I |
| H | amino acid | $NH_2$ | SH | H |
| H | amino acid | $NH_2$ | SH | $NH_2$ |
| H | amino acid | $NH_2$ | SH | NH-cyclopropyl |
| H | amino acid | $NH_2$ | SH | NH-methyl |
| H | amino acid | $NH_2$ | SH | NH-ethyl |
| H | amino acid | $NH_2$ | SH | NH-acetyl |
| H | amino acid | $NH_2$ | SH | OH |
| H | amino acid | $NH_2$ | SH | OMe |
| H | amino acid | $NH_2$ | SH | OEt |
| H | amino acid | $NH_2$ | SH | O-cyclopropyl |
| H | amino acid | $NH_2$ | SH | O-acetyl |
| H | amino acid | $NH_2$ | SH | SH |
| H | amino acid | $NH_2$ | SH | SMe |
| H | amino acid | $NH_2$ | SH | SEt |
| H | amino acid | $NH_2$ | SH | S-cyclopropyl |
| H | amino acid | $NH_2$ | SH | F |
| H | amino acid | $NH_2$ | SH | Cl |
| H | amino acid | $NH_2$ | SH | Br |
| H | amino acid | $NH_2$ | SH | I |
| amino acid | amino acid | $NH_2$ | SH | H |
| amino acid | amino acid | $NH_2$ | SH | $NH_2$ |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | $NH_2$ | SH | NH-cyclopropyl |
| amino acid | amino acid | $NH_2$ | SH | NH-methyl |
| amino acid | amino acid | $NH_2$ | SH | NH-ethyl |
| amino acid | amino acid | $NH_2$ | SH | NH-acetyl |
| amino acid | amino acid | $NH_2$ | SH | OH |
| amino acid | amino acid | $NH_2$ | SH | OMe |
| amino acid | amino acid | $NH_2$ | SH | OEt |
| amino acid | amino acid | $NH_2$ | SH | O-cyclopropyl |
| amino acid | amino acid | $NH_2$ | SH | O-acetyl |
| amino acid | amino acid | $NH_2$ | SH | SH |
| amino acid | amino acid | $NH_2$ | SH | SMe |
| amino acid | amino acid | $NH_2$ | SH | SEt |
| amino acid | amino acid | $NH_2$ | SH | S-cyclopropyl |
| amino acid | amino acid | $NH_2$ | SH | F |
| amino acid | amino acid | $NH_2$ | SH | Cl |
| amino acid | amino acid | $NH_2$ | SH | Br |
| amino acid | amino acid | $NH_2$ | SH | I |
| amino acid | H | $NH_2$ | SH | H |
| amino acid | H | $NH_2$ | SH | $NH_2$ |
| amino acid | H | $NH_2$ | SH | NH-cyclopropyl |
| amino acid | H | $NH_2$ | SH | NH-methyl |
| amino acid | H | $NH_2$ | SH | NH-ethyl |
| amino acid | H | $NH_2$ | SH | NH-acetyl |
| amino acid | H | $NH_2$ | SH | OH |
| amino acid | H | $NH_2$ | SH | OMe |
| amino acid | H | $NH_2$ | SH | OEt |
| amino acid | H | $NH_2$ | SH | O-cyclopropyl |
| amino acid | H | $NH_2$ | SH | O-acetyl |
| amino acid | H | $NH_2$ | SH | SH |
| amino acid | H | $NH_2$ | SH | SMe |
| amino acid | H | $NH_2$ | SH | SEt |
| amino acid | H | $NH_2$ | SH | S-cyclopropyl |
| amino acid | H | $NH_2$ | SH | F |
| amino acid | H | $NH_2$ | SH | Cl |
| amino acid | H | $NH_2$ | SH | Br |
| amino acid | H | $NH_2$ | SH | I |
| amino acid | acyl | $NH_2$ | SH | H |
| amino acid | acyl | $NH_2$ | SH | $NH_2$ |
| amino acid | acyl | $NH_2$ | SH | NH-cyclopropyl |
| amino acid | acyl | $NH_2$ | SH | NH-methyl |
| amino acid | acyl | $NH_2$ | SH | NH-ethyl |
| amino acid | acyl | $NH_2$ | SH | NH-acetyl |
| amino acid | acyl | $NH_2$ | SH | OH |
| amino acid | acyl | $NH_2$ | SH | OMe |
| amino acid | acyl | $NH_2$ | SH | OEt |
| amino acid | acyl | $NH_2$ | SH | O-cyclopropyl |
| amino acid | acyl | $NH_2$ | SH | O-acetyl |
| amino acid | acyl | $NH_2$ | SH | SH |
| amino acid | acyl | $NH_2$ | SH | SMe |
| amino acid | acyl | $NH_2$ | SH | SEt |
| amino acid | acyl | $NH_2$ | SH | S-cyclopropyl |
| amino acid | acyl | $NH_2$ | SH | F |
| amino acid | acyl | $NH_2$ | SH | Cl |
| amino acid | acyl | $NH_2$ | SH | Br |
| amino acid | acyl | $NH_2$ | SH | I |
| acyl | H | SH | SH | H |
| acyl | H | SH | SH | $NH_2$ |
| acyl | H | SH | SH | NH-cyclopropyl |
| acyl | H | SH | SH | NH-methyl |
| acyl | H | SH | SH | NH-ethyl |
| acyl | H | SH | SH | NH-acetyl |
| acyl | H | SH | SH | OH |
| acyl | H | SH | SH | OMe |
| acyl | H | SH | SH | OEt |
| acyl | H | SH | SH | O-cyclopropyl |
| acyl | H | SH | SH | O-acetyl |
| acyl | H | SH | SH | SH |
| acyl | H | SH | SH | SMe |
| acyl | H | SH | SH | SEt |
| acyl | H | SH | SH | S-cyclopropyl |
| acyl | H | SH | SH | F |
| acyl | H | SH | SH | Cl |
| acyl | H | SH | SH | Br |
| acyl | H | SH | SH | I |
| acyl | acyl | SH | SH | H |
| acyl | acyl | SH | SH | $NH_2$ |
| acyl | acyl | SH | SH | NH-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | SH | SH | NH-methyl |
| acyl | acyl | SH | SH | NH-ethyl |
| acyl | acyl | SH | SH | NH-acetyl |
| acyl | acyl | SH | SH | OH |
| acyl | acyl | SH | SH | OMe |
| acyl | acyl | SH | SH | OEt |
| acyl | acyl | SH | SH | O-cyclopropyl |
| acyl | acyl | SH | SH | O-acetyl |
| acyl | acyl | SH | SH | SH |
| acyl | acyl | SH | SH | SMe |
| acyl | acyl | SH | SH | SEt |
| acyl | acyl | SH | SH | S-cyclopropyl |
| acyl | acyl | SH | SH | F |
| acyl | acyl | SH | SH | Cl |
| acyl | acyl | SH | SH | Br |
| acyl | acyl | SH | SH | I |
| acyl | amino acid | SH | SH | H |
| acyl | amino acid | SH | SH | $NH_2$ |
| acyl | amino acid | SH | SH | NH-cyclopropyl |
| acyl | amino acid | SH | SH | NH-methyl |
| acyl | amino acid | SH | SH | NH-ethyl |
| acyl | amino acid | SH | SH | NH-acetyl |
| acyl | amino acid | SH | SH | OH |
| acyl | amino acid | SH | SH | OMe |
| acyl | amino acid | SH | SH | OEt |
| acyl | amino acid | SH | SH | O-cyclopropyl |
| acyl | amino acid | SH | SH | O-acetyl |
| acyl | amino acid | SH | SH | SH |
| acyl | amino acid | SH | SH | SMe |
| acyl | amino acid | SH | SH | SEt |
| acyl | amino acid | SH | SH | S-cyclopropyl |
| acyl | amino acid | SH | SH | F |
| acyl | amino acid | SH | SH | Cl |
| acyl | amino acid | SH | SH | Br |
| acyl | amino acid | SH | SH | I |
| H | acyl | SH | SH | H |
| H | acyl | SH | SH | $NH_2$ |
| H | acyl | SH | SH | NH-cyclopropyl |
| H | acyl | SH | SH | NH-methyl |
| H | acyl | SH | SH | NH-ethyl |
| H | acyl | SH | SH | NH-acetyl |
| H | acyl | SH | SH | OH |
| H | acyl | SH | SH | OMe |
| H | acyl | SH | SH | OEt |
| H | acyl | SH | SH | O-cyclopropyl |
| H | acyl | SH | SH | O-acetyl |
| H | acyl | SH | SH | SH |
| H | acyl | SH | SH | SMe |
| H | acyl | SH | SH | SEt |
| H | acyl | SH | SH | S-cyclopropyl |
| H | acyl | SH | SH | F |
| H | acyl | SH | SH | Cl |
| H | acyl | SH | SH | Br |
| H | acyl | SH | SH | I |
| H | amino acid | SH | SH | H |
| H | amino acid | SH | SH | $NH_2$ |
| H | amino acid | SH | SH | NH-cyclopropyl |
| H | amino acid | SH | SH | NH-methyl |
| H | amino acid | SH | SH | NH-ethyl |
| H | amino acid | SH | SH | NH-acetyl |
| H | amino acid | SH | SH | OH |
| H | amino acid | SH | SH | OMe |
| H | amino acid | SH | SH | OEt |
| H | amino acid | SH | SH | O-cyclopropyl |
| H | amino acid | SH | SH | O-acetyl |
| H | amino acid | SH | SH | SH |
| H | amino acid | SH | SH | SMe |
| H | amino acid | SH | SH | SEt |
| H | amino acid | SH | SH | S-cyclopropyl |
| H | amino acid | SH | SH | F |
| H | amino acid | SH | SH | Cl |
| H | amino acid | SH | SH | Br |
| H | amino acid | SH | SH | I |
| amino acid | amino acid | SH | SH | H |
| amino acid | amino acid | SH | SH | $NH_2$ |
| amino acid | amino acid | SH | SH | NH-cyclopropyl |
| amino acid | amino acid | SH | SH | NH-methyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | SH | SH | NH-ethyl |
| amino acid | amino acid | SH | SH | NH-acetyl |
| amino acid | amino acid | SH | SH | OH |
| amino acid | amino acid | SH | SH | OMe |
| amino acid | amino acid | SH | SH | OEt |
| amino acid | amino acid | SH | SH | O-cyclopropyl |
| amino acid | amino acid | SH | SH | O-acetyl |
| amino acid | amino acid | SH | SH | SH |
| amino acid | amino acid | SH | SH | SMe |
| amino acid | amino acid | SH | SH | SEt |
| amino acid | amino acid | SH | SH | S-cyclopropyl |
| amino acid | amino acid | SH | SH | F |
| amino acid | amino acid | SH | SH | Cl |
| amino acid | amino acid | SH | SH | Br |
| amino acid | amino acid | SH | SH | I |
| amino acid | H | SH | SH | H |
| amino acid | H | SH | SH | $NH_2$ |
| amino acid | H | SH | SH | NH-cyclopropyl |
| amino acid | H | SH | SH | NH-methyl |
| amino acid | H | SH | SH | NH-ethyl |
| amino acid | H | SH | SH | NH-acetyl |
| amino acid | H | SH | SH | OH |
| amino acid | H | SH | SH | OMe |
| amino acid | H | SH | SH | OEt |
| amino acid | H | SH | SH | O-cyclopropyl |
| amino acid | H | SH | SH | O-acetyl |
| amino acid | H | SH | SH | SH |
| amino acid | H | SH | SH | SMe |
| amino acid | H | SH | SH | SEt |
| amino acid | H | SH | SH | S-cyclopropyl |
| amino acid | H | SH | SH | F |
| amino acid | H | SH | SH | Cl |
| amino acid | H | SH | SH | Br |
| amino acid | H | SH | SH | I |
| amino acid | acyl | SH | SH | H |
| amino acid | acyl | SH | SH | $NH_2$ |
| amino acid | acyl | SH | SH | NH-cyclopropyl |
| amino acid | acyl | SH | SH | NH-methyl |
| amino acid | acyl | SH | SH | NH-ethyl |
| amino acid | acyl | SH | SH | NH-acetyl |
| amino acid | acyl | SH | SH | OH |
| amino acid | acyl | SH | SH | OMe |
| amino acid | acyl | SH | SH | OEt |
| amino acid | acyl | SH | SH | O-cyclopropyl |
| amino acid | acyl | SH | SH | O-acetyl |
| amino acid | acyl | SH | SH | SH |
| amino acid | acyl | SH | SH | SMe |
| amino acid | acyl | SH | SH | SEt |
| amino acid | acyl | SH | SH | S-cyclopropyl |
| amino acid | acyl | SH | SH | F |
| amino acid | acyl | SH | SH | Cl |
| amino acid | acyl | SH | SH | Br |
| amino acid | acyl | SH | SH | I |
| acyl | H | OH | SH | H |
| acyl | H | OH | SH | $NH_2$ |
| acyl | H | OH | SH | NH-cyclopropyl |
| acyl | H | OH | SH | NH-methyl |
| acyl | H | OH | SH | NH-ethyl |
| acyl | H | OH | SH | NH-acetyl |
| acyl | H | OH | SH | OH |
| acyl | H | OH | SH | OMe |
| acyl | H | OH | SH | OEt |
| acyl | H | OH | SH | O-cyclopropyl |
| acyl | H | OH | SH | O-acetyl |
| acyl | H | OH | SH | SH |
| acyl | H | OH | SH | SMe |
| acyl | H | OH | SH | SEt |
| acyl | H | OH | SH | S-cyclopropyl |
| acyl | H | OH | SH | F |
| acyl | H | OH | SH | Cl |
| acyl | H | OH | SH | Br |
| acyl | H | OH | SH | I |
| acyl | acyl | OH | SH | H |
| acyl | acyl | OH | SH | $NH_2$ |
| acyl | acyl | OH | SH | NH-cyclopropyl |
| acyl | acyl | OH | SH | NH-methyl |
| acyl | acyl | OH | SH | NH-ethyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | OH | SH | NH-acetyl |
| acyl | acyl | OH | SH | OH |
| acyl | acyl | OH | SH | OMe |
| acyl | acyl | OH | SH | OEt |
| acyl | acyl | OH | SH | O-cyclopropyl |
| acyl | acyl | OH | SH | O-acetyl |
| acyl | acyl | OH | SH | SH |
| acyl | acyl | OH | SH | SMe |
| acyl | acyl | OH | SH | SEt |
| acyl | acyl | OH | SH | S-cyclopropyl |
| acyl | acyl | OH | SH | F |
| acyl | acyl | OH | SH | Cl |
| acyl | acyl | OH | SH | Br |
| acyl | acyl | OH | SH | I |
| acyl | amino acid | OH | SH | H |
| acyl | amino acid | OH | SH | $NH_2$ |
| acyl | amino acid | OH | SH | NH-cyclopropyl |
| acyl | amino acid | OH | SH | NH-methyl |
| acyl | amino acid | OH | SH | NH-ethyl |
| acyl | amino acid | OH | SH | NH-acetyl |
| acyl | amino acid | OH | SH | OH |
| acyl | amino acid | OH | SH | OMe |
| acyl | amino acid | OH | SH | OEt |
| acyl | amino acid | OH | SH | O-cyclopropyl |
| acyl | amino acid | OH | SH | O-acetyl |
| acyl | amino acid | OH | SH | SH |
| acyl | amino acid | OH | SH | SMe |
| acyl | amino acid | OH | SH | SEt |
| acyl | amino acid | OH | SH | S-cyclopropyl |
| acyl | amino acid | OH | SH | F |
| acyl | amino acid | OH | SH | Cl |
| acyl | amino acid | OH | SH | Br |
| acyl | amino acid | OH | SH | I |
| H | acyl | OH | SH | H |
| H | acyl | OH | SH | $NH_2$ |
| H | acyl | OH | SH | NH-cyclopropyl |
| H | acyl | OH | SH | NH-methyl |
| H | acyl | OH | SH | NH-ethyl |
| H | acyl | OH | SH | NH-acetyl |
| H | acyl | OH | SH | OH |
| H | acyl | OH | SH | OMe |
| H | acyl | OH | SH | OEt |
| H | acyl | OH | SH | O-cyclopropyl |
| H | acyl | OH | SH | O-acetyl |
| H | acyl | OH | SH | SH |
| H | acyl | OH | SH | SMe |
| H | acyl | OH | SH | SEt |
| H | acyl | OH | SH | S-cyclopropyl |
| H | acyl | OH | SH | F |
| H | acyl | OH | SH | Cl |
| H | acyl | OH | SH | Br |
| H | acyl | OH | SH | I |
| H | amino acid | OH | SH | H |
| H | amino acid | OH | SH | $NH_2$ |
| H | amino acid | OH | SH | NH-cyclopropyl |
| H | amino acid | OH | SH | NH-methyl |
| H | amino acid | OH | SH | NH-ethyl |
| H | amino acid | OH | SH | NH-acetyl |
| H | amino acid | OH | SH | OH |
| H | amino acid | OH | SH | OMe |
| H | amino acid | OH | SH | OEt |
| H | amino acid | OH | SH | O-cyclopropyl |
| H | amino acid | OH | SH | O-acetyl |
| H | amino acid | OH | SH | SH |
| H | amino acid | OH | SH | SMe |
| H | amino acid | OH | SH | SEt |
| H | amino acid | OH | SH | S-cyclopropyl |
| H | amino acid | OH | SH | F |
| H | amino acid | OH | SH | Cl |
| H | amino acid | OH | SH | Br |
| H | amino acid | OH | SH | I |
| amino acid | amino acid | OH | SH | H |
| amino acid | amino acid | OH | SH | $NH_2$ |
| amino acid | amino acid | OH | SH | NH-cyclopropyl |
| amino acid | amino acid | OH | SH | NH-methyl |
| amino acid | amino acid | OH | SH | NH-ethyl |
| amino acid | amino acid | OH | SH | NH-acetyl |
| amino acid | amino acid | OH | SH | OH |
| amino acid | amino acid | OH | SH | OMe |
| amino acid | amino acid | OH | SH | OEt |
| amino acid | amino acid | OH | SH | O-cyclopropyl |
| amino acid | amino acid | OH | SH | O-acetyl |
| amino acid | amino acid | OH | SH | SH |
| amino acid | amino acid | OH | SH | SMe |
| amino acid | amino acid | OH | SH | SEt |
| amino acid | amino acid | OH | SH | S-cyclopropyl |
| amino acid | amino acid | OH | SH | F |
| amino acid | amino acid | OH | SH | Cl |
| amino acid | amino acid | OH | SH | Br |
| amino acid | amino acid | OH | SH | I |
| amino acid | H | OH | SH | H |
| amino acid | H | OH | SH | $NH_2$ |
| amino acid | H | OH | SH | NH-cyclopropyl |
| amino acid | H | OH | SH | NH-methyl |
| amino acid | H | OH | SH | NH-ethyl |
| amino acid | H | OH | SH | NH-acetyl |
| amino acid | H | OH | SH | OH |
| amino acid | H | OH | SH | OMe |
| amino acid | H | OH | SH | OEt |
| amino acid | H | OH | SH | O-cyclopropyl |
| amino acid | H | OH | SH | O-acetyl |
| amino acid | H | OH | SH | SH |
| amino acid | H | OH | SH | SMe |
| amino acid | H | OH | SH | SEt |
| amino acid | H | OH | SH | S-cyclopropyl |
| amino acid | H | OH | SH | F |
| amino acid | H | OH | SH | Cl |
| amino acid | H | OH | SH | Br |
| amino acid | H | OH | SH | I |
| amino acid | acyl | OH | SH | H |
| amino acid | acyl | OH | SH | $NH_2$ |
| amino acid | acyl | OH | SH | NH-cyclopropyl |
| amino acid | acyl | OH | SH | NH-methyl |
| amino acid | acyl | OH | SH | NH-ethyl |
| amino acid | acyl | OH | SH | NH-acetyl |
| amino acid | acyl | OH | SH | OH |
| amino acid | acyl | OH | SH | OMe |
| amino acid | acyl | OH | SH | OEt |
| amino acid | acyl | OH | SH | O-cyclopropyl |
| amino acid | acyl | OH | SH | O-acetyl |
| amino acid | acyl | OH | SH | SH |
| amino acid | acyl | OH | SH | SMe |
| amino acid | acyl | OH | SH | SEt |
| amino acid | acyl | OH | SH | S-cyclopropyl |
| amino acid | acyl | OH | SH | F |
| amino acid | acyl | OH | SH | Cl |
| amino acid | acyl | OH | SH | Br |
| amino acid | acyl | OH | SH | I |
| acyl | H | $CH_3$ | OH | H |
| acyl | H | $CH_3$ | OH | $NH_2$ |
| acyl | H | $CH_3$ | OH | NH-cyclopropyl |
| acyl | H | $CH_3$ | OH | NH-methyl |
| acyl | H | $CH_3$ | OH | NH-ethyl |
| acyl | H | $CH_3$ | OH | NH-acetyl |
| acyl | H | $CH_3$ | OH | OH |
| acyl | H | $CH_3$ | OH | OMe |
| acyl | H | $CH_3$ | OH | OEt |
| acyl | H | $CH_3$ | OH | O-cyclopropyl |
| acyl | H | $CH_3$ | OH | O-acetyl |
| acyl | H | $CH_3$ | OH | SH |
| acyl | H | $CH_3$ | OH | SMe |
| acyl | H | $CH_3$ | OH | SEt |
| acyl | H | $CH_3$ | OH | S-cyclopropyl |
| acyl | H | $CH_3$ | OH | F |
| acyl | H | $CH_3$ | OH | Cl |
| acyl | H | $CH_3$ | OH | Br |
| acyl | H | $CH_3$ | OH | I |
| acyl | acyl | $CH_3$ | OH | H |
| acyl | acyl | $CH_3$ | OH | $NH_2$ |
| acyl | acyl | $CH_3$ | OH | NH-cyclopropyl |
| acyl | acyl | $CH_3$ | OH | NH-methyl |
| acyl | acyl | $CH_3$ | OH | NH-ethyl |
| acyl | acyl | $CH_3$ | OH | NH-acetyl |
| acyl | acyl | $CH_3$ | OH | OH |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | $CH_3$ | OH | OMe |
| acyl | acyl | $CH_3$ | OH | OEt |
| acyl | acyl | $CH_3$ | OH | O-cyclopropyl |
| acyl | acyl | $CH_3$ | OH | O-acetyl |
| acyl | acyl | $CH_3$ | OH | SH |
| acyl | acyl | $CH_3$ | OH | SMe |
| acyl | acyl | $CH_3$ | OH | SEt |
| acyl | acyl | $CH_3$ | OH | S-cyclopropyl |
| acyl | acyl | $CH_3$ | OH | F |
| acyl | acyl | $CH_3$ | OH | Cl |
| acyl | acyl | $CH_3$ | OH | Br |
| acyl | acyl | $CH_3$ | OH | I |
| acyl | amino acid | $CH_3$ | OH | H |
| acyl | amino acid | $CH_3$ | OH | $NH_2$ |
| acyl | amino acid | $CH_3$ | OH | NH-cyclopropyl |
| acyl | amino acid | $CH_3$ | OH | NH-methyl |
| acyl | amino acid | $CH_3$ | OH | NH-ethyl |
| acyl | amino acid | $CH_3$ | OH | NH-acetyl |
| acyl | amino acid | $CH_3$ | OH | OH |
| acyl | amino acid | $CH_3$ | OH | OMe |
| acyl | amino acid | $CH_3$ | OH | OEt |
| acyl | amino acid | $CH_3$ | OH | O-cyclopropyl |
| acyl | amino acid | $CH_3$ | OH | O-acetyl |
| acyl | amino acid | $CH_3$ | OH | SH |
| acyl | amino acid | $CH_3$ | OH | SMe |
| acyl | amino acid | $CH_3$ | OH | SEt |
| acyl | amino acid | $CH_3$ | OH | S-cyclopropyl |
| acyl | amino acid | $CH_3$ | OH | F |
| acyl | amino acid | $CH_3$ | OH | Cl |
| acyl | amino acid | $CH_3$ | OH | Br |
| acyl | amino acid | $CH_3$ | OH | I |
| H | acyl | $CH_3$ | OH | H |
| H | acyl | $CH_3$ | OH | $NH_2$ |
| H | acyl | $CH_3$ | OH | NH-cyclopropyl |
| H | acyl | $CH_3$ | OH | NH-methyl |
| H | acyl | $CH_3$ | OH | NH-ethyl |
| H | acyl | $CH_3$ | OH | NH-acetyl |
| H | acyl | $CH_3$ | OH | OH |
| H | acyl | $CH_3$ | OH | OMe |
| H | acyl | $CH_3$ | OH | OEt |
| H | acyl | $CH_3$ | OH | O-cyclopropyl |
| H | acyl | $CH_3$ | OH | O-acetyl |
| H | acyl | $CH_3$ | OH | SH |
| H | acyl | $CH_3$ | OH | SMe |
| H | acyl | $CH_3$ | OH | SEt |
| H | acyl | $CH_3$ | OH | S-cyclopropyl |
| H | acyl | $CH_3$ | OH | F |
| H | acyl | $CH_3$ | OH | Cl |
| H | acyl | $CH_3$ | OH | Br |
| H | acyl | $CH_3$ | OH | I |
| H | amino acid | $CH_3$ | OH | H |
| H | amino acid | $CH_3$ | OH | $NH_2$ |
| H | amino acid | $CH_3$ | OH | NH-cyclopropyl |
| H | amino acid | $CH_3$ | OH | NH-methyl |
| H | amino acid | $CH_3$ | OH | NH-ethyl |
| H | amino acid | $CH_3$ | OH | NH-acetyl |
| H | amino acid | $CH_3$ | OH | OH |
| H | amino acid | $CH_3$ | OH | OMe |
| H | amino acid | $CH_3$ | OH | OEt |
| H | amino acid | $CH_3$ | OH | O-cyclopropyl |
| H | amino acid | $CH_3$ | OH | O-acetyl |
| H | amino acid | $CH_3$ | OH | SH |
| H | amino acid | $CH_3$ | OH | SMe |
| H | amino acid | $CH_3$ | OH | SEt |
| H | amino acid | $CH_3$ | OH | S-cyclopropyl |
| H | amino acid | $CH_3$ | OH | F |
| H | amino acid | $CH_3$ | OH | Cl |
| H | amino acid | $CH_3$ | OH | Br |
| H | amino acid | $CH_3$ | OH | I |
| amino acid | amino acid | $CH_3$ | OH | H |
| amino acid | amino acid | $CH_3$ | OH | $NH_2$ |
| amino acid | amino acid | $CH_3$ | OH | NH-cyclopropyl |
| amino acid | amino acid | $CH_3$ | OH | NH-methyl |
| amino acid | amino acid | $CH_3$ | OH | NH-ethyl |
| amino acid | amino acid | $CH_3$ | OH | NH-acetyl |
| amino acid | amino acid | $CH_3$ | OH | OH |
| amino acid | amino acid | $CH_3$ | OH | OMe |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | $CH_3$ | OH | OEt |
| amino acid | amino acid | $CH_3$ | OH | O-cyclopropyl |
| amino acid | amino acid | $CH_3$ | OH | O-acetyl |
| amino acid | amino acid | $CH_3$ | OH | SH |
| amino acid | amino acid | $CH_3$ | OH | SMe |
| amino acid | amino acid | $CH_3$ | OH | SEt |
| amino acid | amino acid | $CH_3$ | OH | S-cyclopropyl |
| amino acid | amino acid | $CH_3$ | OH | F |
| amino acid | amino acid | $CH_3$ | OH | Cl |
| amino acid | amino acid | $CH_3$ | OH | Br |
| amino acid | amino acid | $CH_3$ | OH | I |
| amino acid | H | $CH_3$ | OH | H |
| amino acid | H | $CH_3$ | OH | $NH_2$ |
| amino acid | H | $CH_3$ | OH | NH-cyclopropyl |
| amino acid | H | $CH_3$ | OH | NH-methyl |
| amino acid | H | $CH_3$ | OH | NH-ethyl |
| amino acid | H | $CH_3$ | OH | NH-acetyl |
| amino acid | H | $CH_3$ | OH | OH |
| amino acid | H | $CH_3$ | OH | OMe |
| amino acid | H | $CH_3$ | OH | OEt |
| amino acid | H | $CH_3$ | OH | O-cyclopropyl |
| amino acid | H | $CH_3$ | OH | O-acetyl |
| amino acid | H | $CH_3$ | OH | SH |
| amino acid | H | $CH_3$ | OH | SMe |
| amino acid | H | $CH_3$ | OH | SEt |
| amino acid | H | $CH_3$ | OH | S-cyclopropyl |
| amino acid | H | $CH_3$ | OH | F |
| amino acid | H | $CH_3$ | OH | Cl |
| amino acid | H | $CH_3$ | OH | Br |
| amino acid | H | $CH_3$ | OH | I |
| amino acid | acyl | $CH_3$ | OH | H |
| amino acid | acyl | $CH_3$ | OH | $NH_2$ |
| amino acid | acyl | $CH_3$ | OH | NH-cyclopropyl |
| amino acid | acyl | $CH_3$ | OH | NH-methyl |
| amino acid | acyl | $CH_3$ | OH | NH-ethyl |
| amino acid | acyl | $CH_3$ | OH | NH-acetyl |
| amino acid | acyl | $CH_3$ | OH | OH |
| amino acid | acyl | $CH_3$ | OH | OMe |
| amino acid | acyl | $CH_3$ | OH | OEt |
| amino acid | acyl | $CH_3$ | OH | O-cyclopropyl |
| amino acid | acyl | $CH_3$ | OH | O-acetyl |
| amino acid | acyl | $CH_3$ | OH | SH |
| amino acid | acyl | $CH_3$ | OH | SMe |
| amino acid | acyl | $CH_3$ | OH | SEt |
| amino acid | acyl | $CH_3$ | OH | S-cyclopropyl |
| amino acid | acyl | $CH_3$ | OH | F |
| amino acid | acyl | $CH_3$ | OH | Cl |
| amino acid | acyl | $CH_3$ | OH | Br |
| amino acid | acyl | $CH_3$ | OH | I |
| acyl | H | $CF_3$ | OH | H |
| acyl | H | $CF_3$ | OH | $NH_2$ |
| acyl | H | $CF_3$ | OH | NH-cyclopropyl |
| acyl | H | $CF_3$ | OH | NH-methyl |
| acyl | H | $CF_3$ | OH | NH-ethyl |
| acyl | H | $CF_3$ | OH | NH-acetyl |
| acyl | H | $CF_3$ | OH | OH |
| acyl | H | $CF_3$ | OH | OMe |
| acyl | H | $CF_3$ | OH | OEt |
| acyl | H | $CF_3$ | OH | O-cyclopropyl |
| acyl | H | $CF_3$ | OH | O-acetyl |
| acyl | H | $CF_3$ | OH | SH |
| acyl | H | $CF_3$ | OH | SMe |
| acyl | H | $CF_3$ | OH | SEt |
| acyl | H | $CF_3$ | OH | S-cyclopropyl |
| acyl | H | $CF_3$ | OH | F |
| acyl | H | $CF_3$ | OH | Cl |
| acyl | H | $CF_3$ | OH | Br |
| acyl | H | $CF_3$ | OH | I |
| acyl | acyl | $CF_3$ | OH | H |
| acyl | acyl | $CF_3$ | OH | $NH_2$ |
| acyl | acyl | $CF_3$ | OH | NH-cyclopropyl |
| acyl | acyl | $CF_3$ | OH | NH-methyl |
| acyl | acyl | $CF_3$ | OH | NH-ethyl |
| acyl | acyl | $CF_3$ | OH | NH-acetyl |
| acyl | acyl | $CF_3$ | OH | OH |
| acyl | acyl | $CF_3$ | OH | OMe |
| acyl | acyl | $CF_3$ | OH | OEt |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | $CF_3$ | OH | O-cyclopropyl |
| acyl | acyl | $CF_3$ | OH | O-acetyl |
| acyl | acyl | $CF_3$ | OH | SH |
| acyl | acyl | $CF_3$ | OH | SMe |
| acyl | acyl | $CF_3$ | OH | SEt |
| acyl | acyl | $CF_3$ | OH | S-cyclopropyl |
| acyl | acyl | $CF_3$ | OH | F |
| acyl | acyl | $CF_3$ | OH | Cl |
| acyl | acyl | $CF_3$ | OH | Br |
| acyl | acyl | $CF_3$ | OH | I |
| acyl | amino acid | $CF_3$ | OH | H |
| acyl | amino acid | $CF_3$ | OH | $NH_2$ |
| acyl | amino acid | $CF_3$ | OH | NH-cyclopropyl |
| acyl | amino acid | $CF_3$ | OH | NH-methyl |
| acyl | amino acid | $CF_3$ | OH | NH-ethyl |
| acyl | amino acid | $CF_3$ | OH | NH-acetyl |
| acyl | amino acid | $CF_3$ | OH | OH |
| acyl | amino acid | $CF_3$ | OH | OMe |
| acyl | amino acid | $CF_3$ | OH | OEt |
| acyl | amino acid | $CF_3$ | OH | O-cyclopropyl |
| acyl | amino acid | $CF_3$ | OH | O-acetyl |
| acyl | amino acid | $CF_3$ | OH | SH |
| acyl | amino acid | $CF_3$ | OH | SMe |
| acyl | amino acid | $CF_3$ | OH | SEt |
| acyl | amino acid | $CF_3$ | OH | S-cyclopropyl |
| acyl | amino acid | $CF_3$ | OH | F |
| acyl | amino acid | $CF_3$ | OH | Cl |
| acyl | amino acid | $CF_3$ | OH | Br |
| acyl | amino acid | $CF_3$ | OH | I |
| H | acyl | $CF_3$ | OH | H |
| H | acyl | $CF_3$ | OH | $NH_2$ |
| H | acyl | $CF_3$ | OH | NH-cyclopropyl |
| H | acyl | $CF_3$ | OH | NH-methyl |
| H | acyl | $CF_3$ | OH | NH-ethyl |
| H | acyl | $CF_3$ | OH | NH-acetyl |
| H | acyl | $CF_3$ | OH | OH |
| H | acyl | $CF_3$ | OH | OMe |
| H | acyl | $CF_3$ | OH | OEt |
| H | acyl | $CF_3$ | OH | O-cyclopropyl |
| H | acyl | $CF_3$ | OH | O-acetyl |
| H | acyl | $CF_3$ | OH | SH |
| H | acyl | $CF_3$ | OH | SMe |
| H | acyl | $CF_3$ | OH | SEt |
| H | acyl | $CF_3$ | OH | S-cyclopropyl |
| H | acyl | $CF_3$ | OH | F |
| H | acyl | $CF_3$ | OH | Cl |
| H | acyl | $CF_3$ | OH | Br |
| H | acyl | $CF_3$ | OH | I |
| H | amino acid | $CF_3$ | OH | H |
| H | amino acid | $CF_3$ | OH | $NH_2$ |
| H | amino acid | $CF_3$ | OH | NH-cyclopropyl |
| H | amino acid | $CF_3$ | OH | NH-methyl |
| H | amino acid | $CF_3$ | OH | NH-ethyl |
| H | amino acid | $CF_3$ | OH | NH-acetyl |
| H | amino acid | $CF_3$ | OH | OH |
| H | amino acid | $CF_3$ | OH | OMe |
| H | amino acid | $CF_3$ | OH | OEt |
| H | amino acid | $CF_3$ | OH | O-cyclopropyl |
| H | amino acid | $CF_3$ | OH | O-acetyl |
| H | amino acid | $CF_3$ | OH | SH |
| H | amino acid | $CF_3$ | OH | SMe |
| H | amino acid | $CF_3$ | OH | SEt |
| H | amino acid | $CF_3$ | OH | S-cyclopropyl |
| H | amino acid | $CF_3$ | OH | F |
| H | amino acid | $CF_3$ | OH | Cl |
| H | amino acid | $CF_3$ | OH | Br |
| H | amino acid | $CF_3$ | OH | I |
| amino acid | amino acid | $CF_3$ | OH | H |
| amino acid | amino acid | $CF_3$ | OH | $NH_2$ |
| amino acid | amino acid | $CF_3$ | OH | NH-cyclopropyl |
| amino acid | amino acid | $CF_3$ | OH | NH-methyl |
| amino acid | amino acid | $CF_3$ | OH | NH-ethyl |
| amino acid | amino acid | $CF_3$ | OH | NH-acetyl |
| amino acid | amino acid | $CF_3$ | OH | OH |
| amino acid | amino acid | $CF_3$ | OH | OMe |
| amino acid | amino acid | $CF_3$ | OH | OEt |
| amino acid | amino acid | $CF_3$ | OH | O-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | $CF_3$ | OH | O-acetyl |
| amino acid | amino acid | $CF_3$ | OH | SH |
| amino acid | amino acid | $CF_3$ | OH | SMe |
| amino acid | amino acid | $CF_3$ | OH | SEt |
| amino acid | amino acid | $CF_3$ | OH | S-cyclopropyl |
| amino acid | amino acid | $CF_3$ | OH | F |
| amino acid | amino acid | $CF_3$ | OH | Cl |
| amino acid | amino acid | $CF_3$ | OH | Br |
| amino acid | amino acid | $CF_3$ | OH | I |
| amino acid | H | $CF_3$ | OH | H |
| amino acid | H | $CF_3$ | OH | $NH_2$ |
| amino acid | H | $CF_3$ | OH | NH-cyclopropyl |
| amino acid | H | $CF_3$ | OH | NH-methyl |
| amino acid | H | $CF_3$ | OH | NH-ethyl |
| amino acid | H | $CF_3$ | OH | NH-acetyl |
| amino acid | H | $CF_3$ | OH | OH |
| amino acid | H | $CF_3$ | OH | OMe |
| amino acid | H | $CF_3$ | OH | OEt |
| amino acid | H | $CF_3$ | OH | O-cyclopropyl |
| amino acid | H | $CF_3$ | OH | O-acetyl |
| amino acid | H | $CF_3$ | OH | SH |
| amino acid | H | $CF_3$ | OH | SMe |
| amino acid | H | $CF_3$ | OH | SEt |
| amino acid | H | $CF_3$ | OH | S-cyclopropyl |
| amino acid | H | $CF_3$ | OH | F |
| amino acid | H | $CF_3$ | OH | Cl |
| amino acid | H | $CF_3$ | OH | Br |
| amino acid | H | $CF_3$ | OH | I |
| amino acid | acyl | $CF_3$ | OH | H |
| amino acid | acyl | $CF_3$ | OH | $NH_2$ |
| amino acid | acyl | $CF_3$ | OH | NH-cyclopropyl |
| amino acid | acyl | $CF_3$ | OH | NH-methyl |
| amino acid | acyl | $CF_3$ | OH | NH-ethyl |
| amino acid | acyl | $CF_3$ | OH | NH-acetyl |
| amino acid | acyl | $CF_3$ | OH | OH |
| amino acid | acyl | $CF_3$ | OH | OMe |
| amino acid | acyl | $CF_3$ | OH | OEt |
| amino acid | acyl | $CF_3$ | OH | O-cyclopropyl |
| amino acid | acyl | $CF_3$ | OH | O-acetyl |
| amino acid | acyl | $CF_3$ | OH | SH |
| amino acid | acyl | $CF_3$ | OH | SMe |
| amino acid | acyl | $CF_3$ | OH | SEt |
| amino acid | acyl | $CF_3$ | OH | S-cyclopropyl |
| amino acid | acyl | $CF_3$ | OH | F |
| amino acid | acyl | $CF_3$ | OH | Cl |
| amino acid | acyl | $CF_3$ | OH | Br |
| amino acid | acyl | $CF_3$ | OH | I |
| acyl | H | Br | OH | H |
| acyl | H | Br | OH | $NH_2$ |
| acyl | H | Br | OH | NH-cyclopropyl |
| acyl | H | Br | OH | NH-methyl |
| acyl | H | Br | OH | NH-ethyl |
| acyl | H | Br | OH | NH-acetyl |
| acyl | H | Br | OH | OH |
| acyl | H | Br | OH | OMe |
| acyl | H | Br | OH | OEt |
| acyl | H | Br | OH | O-cyclopropyl |
| acyl | H | Br | OH | O-acetyl |
| acyl | H | Br | OH | SH |
| acyl | H | Br | OH | SMe |
| acyl | H | Br | OH | SEt |
| acyl | H | Br | OH | S-cyclopropyl |
| acyl | H | Br | OH | F |
| acyl | H | Br | OH | Cl |
| acyl | H | Br | OH | Br |
| acyl | H | Br | OH | I |
| acyl | acyl | Br | OH | H |
| acyl | acyl | Br | OH | $NH_2$ |
| acyl | acyl | Br | OH | NH-cyclopropyl |
| acyl | acyl | Br | OH | NH-methyl |
| acyl | acyl | Br | OH | NH-ethyl |
| acyl | acyl | Br | OH | NH-acetyl |
| acyl | acyl | Br | OH | OH |
| acyl | acyl | Br | OH | OMe |
| acyl | acyl | Br | OH | OEt |
| acyl | acyl | Br | OH | O-cyclopropyl |
| acyl | acyl | Br | OH | O-acetyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | Br | OH | SH |
| acyl | acyl | Br | OH | SMe |
| acyl | acyl | Br | OH | SEt |
| acyl | acyl | Br | OH | S-cyclopropyl |
| acyl | acyl | Br | OH | F |
| acyl | acyl | Br | OH | Cl |
| acyl | acyl | Br | OH | Br |
| acyl | acyl | Br | OH | I |
| acyl | amino acid | Br | OH | H |
| acyl | amino acid | Br | OH | $NH_2$ |
| acyl | amino acid | Br | OH | NH-cyclopropyl |
| acyl | amino acid | Br | OH | NH-methyl |
| acyl | amino acid | Br | OH | NH-ethyl |
| acyl | amino acid | Br | OH | NH-acetyl |
| acyl | amino acid | Br | OH | OH |
| acyl | amino acid | Br | OH | OMe |
| acyl | amino acid | Br | OH | OEt |
| acyl | amino acid | Br | OH | O-cyclopropyl |
| acyl | amino acid | Br | OH | O-acetyl |
| acyl | amino acid | Br | OH | SH |
| acyl | amino acid | Br | OH | SMe |
| acyl | amino acid | Br | OH | SEt |
| acyl | amino acid | Br | OH | S-cyclopropyl |
| acyl | amino acid | Br | OH | F |
| acyl | amino acid | Br | OH | Cl |
| acyl | amino acid | Br | OH | Br |
| acyl | amino acid | Br | OH | I |
| H | acyl | Br | OH | H |
| H | acyl | Br | OH | $NH_2$ |
| H | acyl | Br | OH | NH-cyclopropyl |
| H | acyl | Br | OH | NH-methyl |
| H | acyl | Br | OH | NH-ethyl |
| H | acyl | Br | OH | NH-acetyl |
| H | acyl | Br | OH | OH |
| H | acyl | Br | OH | OMe |
| H | acyl | Br | OH | OEt |
| H | acyl | Br | OH | O-cyclopropyl |
| H | acyl | Br | OH | O-acetyl |
| H | acyl | Br | OH | SH |
| H | acyl | Br | OH | SMe |
| H | acyl | Br | OH | SEt |
| H | acyl | Br | OH | S-cyclopropyl |
| H | acyl | Br | OH | F |
| H | acyl | Br | OH | Cl |
| H | acyl | Br | OH | Br |
| H | acyl | Br | OH | I |
| H | amino acid | Br | OH | H |
| H | amino acid | Br | OH | $NH_2$ |
| H | amino acid | Br | OH | NH-cyclopropyl |
| H | amino acid | Br | OH | NH-methyl |
| H | amino acid | Br | OH | NH-ethyl |
| H | amino acid | Br | OH | NH-acetyl |
| H | amino acid | Br | OH | OH |
| H | amino acid | Br | OH | OMe |
| H | amino acid | Br | OH | OEt |
| H | amino acid | Br | OH | O-cyclopropyl |
| H | amino acid | Br | OH | O-acetyl |
| H | amino acid | Br | OH | SH |
| H | amino acid | Br | OH | SMe |
| H | amino acid | Br | OH | SEt |
| H | amino acid | Br | OH | S-cyclopropyl |
| H | amino acid | Br | OH | F |
| H | amino acid | Br | OH | Cl |
| H | amino acid | Br | OH | Br |
| H | amino acid | Br | OH | I |
| amino acid | amino acid | Br | OH | H |
| amino acid | amino acid | Br | OH | $NH_2$ |
| amino acid | amino acid | Br | OH | NH-cyclopropyl |
| amino acid | amino acid | Br | OH | NH-methyl |
| amino acid | amino acid | Br | OH | NH-ethyl |
| amino acid | amino acid | Br | OH | NH-acetyl |
| amino acid | amino acid | Br | OH | OH |
| amino acid | amino acid | Br | OH | OMe |
| amino acid | amino acid | Br | OH | OEt |
| amino acid | amino acid | Br | OH | O-cyclopropyl |
| amino acid | amino acid | Br | OH | O-acetyl |
| amino acid | amino acid | Br | OH | SH |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | Br | OH | SMe |
| amino acid | amino acid | Br | OH | SEt |
| amino acid | amino acid | Br | OH | S-cyclopropyl |
| amino acid | amino acid | Br | OH | F |
| amino acid | amino acid | Br | OH | Cl |
| amino acid | amino acid | Br | OH | Br |
| amino acid | amino acid | Br | OH | I |
| amino acid | H | Br | OH | H |
| amino acid | H | Br | OH | $NH_2$ |
| amino acid | H | Br | OH | NH-cyclopropyl |
| amino acid | H | Br | OH | NH-methyl |
| amino acid | H | Br | OH | NH-ethyl |
| amino acid | H | Br | OH | NH-acetyl |
| amino acid | H | Br | OH | OH |
| amino acid | H | Br | OH | OMe |
| amino acid | H | Br | OH | OEt |
| amino acid | H | Br | OH | O-cyclopropyl |
| amino acid | H | Br | OH | O-acetyl |
| amino acid | H | Br | OH | SH |
| amino acid | H | Br | OH | SMe |
| amino acid | H | Br | OH | SEt |
| amino acid | H | Br | OH | S-cyclopropyl |
| amino acid | H | Br | OH | F |
| amino acid | H | Br | OH | Cl |
| amino acid | H | Br | OH | Br |
| amino acid | H | Br | OH | I |
| amino acid | acyl | Br | OH | H |
| amino acid | acyl | Br | OH | $NH_2$ |
| amino acid | acyl | Br | OH | NH-cyclopropyl |
| amino acid | acyl | Br | OH | NH-methyl |
| amino acid | acyl | Br | OH | NH-ethyl |
| amino acid | acyl | Br | OH | NH-acetyl |
| amino acid | acyl | Br | OH | OH |
| amino acid | acyl | Br | OH | OMe |
| amino acid | acyl | Br | OH | OEt |
| amino acid | acyl | Br | OH | O-cyclopropyl |
| amino acid | acyl | Br | OH | O-acetyl |
| amino acid | acyl | Br | OH | SH |
| amino acid | acyl | Br | OH | SMe |
| amino acid | acyl | Br | OH | SEt |
| amino acid | acyl | Br | OH | S-cyclopropyl |
| amino acid | acyl | Br | OH | F |
| amino acid | acyl | Br | OH | Cl |
| amino acid | acyl | Br | OH | Br |
| amino acid | acyl | Br | OH | I |
| acyl | H | Cl | OH | H |
| acyl | H | Cl | OH | $NH_2$ |
| acyl | H | Cl | OH | NH-cyclopropyl |
| acyl | H | Cl | OH | NH-methyl |
| acyl | H | Cl | OH | NH-ethyl |
| acyl | H | Cl | OH | NH-acetyl |
| acyl | H | Cl | OH | OH |
| acyl | H | Cl | OH | OMe |
| acyl | H | Cl | OH | OEt |
| acyl | H | Cl | OH | O-cyclopropyl |
| acyl | H | Cl | OH | O-acetyl |
| acyl | H | Cl | OH | SH |
| acyl | H | Cl | OH | SMe |
| acyl | H | Cl | OH | SEt |
| acyl | H | Cl | OH | S-cyclopropyl |
| acyl | H | Cl | OH | F |
| acyl | H | Cl | OH | Cl |
| acyl | H | Cl | OH | Br |
| acyl | H | Cl | OH | I |
| acyl | acyl | Cl | OH | H |
| acyl | acyl | Cl | OH | $NH_2$ |
| acyl | acyl | Cl | OH | NH-cyclopropyl |
| acyl | acyl | Cl | OH | NH-methyl |
| acyl | acyl | Cl | OH | NH-ethyl |
| acyl | acyl | Cl | OH | NH-acetyl |
| acyl | acyl | Cl | OH | OH |
| acyl | acyl | Cl | OH | OMe |
| acyl | acyl | Cl | OH | OEt |
| acyl | acyl | Cl | OH | O-cyclopropyl |
| acyl | acyl | Cl | OH | O-acetyl |
| acyl | acyl | Cl | OH | SH |
| acyl | acyl | Cl | OH | SMe |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | Cl | OH | SEt |
| acyl | acyl | Cl | OH | S-cyclopropyl |
| acyl | acyl | Cl | OH | F |
| acyl | acyl | Cl | OH | Cl |
| acyl | acyl | Cl | OH | Br |
| acyl | acyl | Cl | OH | I |
| acyl | amino acid | Cl | OH | H |
| acyl | amino acid | Cl | OH | $NH_2$ |
| acyl | amino acid | Cl | OH | NH-cyclopropyl |
| acyl | amino acid | Cl | OH | NH-methyl |
| acyl | amino acid | Cl | OH | NH-ethyl |
| acyl | amino acid | Cl | OH | NH-acetyl |
| acyl | amino acid | Cl | OH | OH |
| acyl | amino acid | Cl | OH | OMe |
| acyl | amino acid | Cl | OH | OEt |
| acyl | amino acid | Cl | OH | O-cyclopropyl |
| acyl | amino acid | Cl | OH | O-acetyl |
| acyl | amino acid | Cl | OH | SH |
| acyl | amino acid | Cl | OH | SMe |
| acyl | amino acid | Cl | OH | SEt |
| acyl | amino acid | Cl | OH | S-cyclopropyl |
| acyl | amino acid | Cl | OH | F |
| acyl | amino acid | Cl | OH | Cl |
| acyl | amino acid | Cl | OH | Br |
| acyl | amino acid | Cl | OH | I |
| H | acyl | Cl | OH | H |
| H | acyl | Cl | OH | $NH_2$ |
| H | acyl | Cl | OH | NH-cyclopropyl |
| H | acyl | Cl | OH | NH-methyl |
| H | acyl | Cl | OH | NH-ethyl |
| H | acyl | Cl | OH | NH-acetyl |
| H | acyl | Cl | OH | OH |
| H | acyl | Cl | OH | OMe |
| H | acyl | Cl | OH | OEt |
| H | acyl | Cl | OH | O-cyclopropyl |
| H | acyl | Cl | OH | O-acetyl |
| H | acyl | Cl | OH | SH |
| H | acyl | Cl | OH | SMe |
| H | acyl | Cl | OH | SEt |
| H | acyl | Cl | OH | S-cyclopropyl |
| H | acyl | Cl | OH | F |
| H | acyl | Cl | OH | Cl |
| H | acyl | Cl | OH | Br |
| H | acyl | Cl | OH | I |
| H | amino acid | Cl | OH | H |
| H | amino acid | Cl | OH | $NH_2$ |
| H | amino acid | Cl | OH | NH-cyclopropyl |
| H | amino acid | Cl | OH | NH-methyl |
| H | amino acid | Cl | OH | NH-ethyl |
| H | amino acid | Cl | OH | NH-acetyl |
| H | amino acid | Cl | OH | OH |
| H | amino acid | Cl | OH | OMe |
| H | amino acid | Cl | OH | OEt |
| H | amino acid | Cl | OH | O-cyclopropyl |
| H | amino acid | Cl | OH | O-acetyl |
| H | amino acid | Cl | OH | SH |
| H | amino acid | Cl | OH | SMe |
| H | amino acid | Cl | OH | SEt |
| H | amino acid | Cl | OH | S-cyclopropyl |
| H | amino acid | Cl | OH | F |
| H | amino acid | Cl | OH | Cl |
| H | amino acid | Cl | OH | Br |
| H | amino acid | Cl | OH | I |
| amino acid | amino acid | Cl | OH | H |
| amino acid | amino acid | Cl | OH | $NH_2$ |
| amino acid | amino acid | Cl | OH | NH-cyclopropyl |
| amino acid | amino acid | Cl | OH | NH-methyl |
| amino acid | amino acid | Cl | OH | NH-ethyl |
| amino acid | amino acid | Cl | OH | NH-acetyl |
| amino acid | amino acid | Cl | OH | OH |
| amino acid | amino acid | Cl | OH | OMe |
| amino acid | amino acid | Cl | OH | OEt |
| amino acid | amino acid | Cl | OH | O-cyclopropyl |
| amino acid | amino acid | Cl | OH | O-acetyl |
| amino acid | amino acid | Cl | OH | SH |
| amino acid | amino acid | Cl | OH | SMe |
| amino acid | amino acid | Cl | OH | SEt |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | Cl | OH | S-cyclopropyl |
| amino acid | amino acid | Cl | OH | F |
| amino acid | amino acid | Cl | OH | Cl |
| amino acid | amino acid | Cl | OH | Br |
| amino acid | amino acid | Cl | OH | I |
| amino acid | H | Cl | OH | H |
| amino acid | H | Cl | OH | $NH_2$ |
| amino acid | H | Cl | OH | NH-cyclopropyl |
| amino acid | H | Cl | OH | NH-methyl |
| amino acid | H | Cl | OH | NH-ethyl |
| amino acid | H | Cl | OH | NH-acetyl |
| amino acid | H | Cl | OH | OH |
| amino acid | H | Cl | OH | OMe |
| amino acid | H | Cl | OH | OEt |
| amino acid | H | Cl | OH | O-cyclopropyl |
| amino acid | H | Cl | OH | O-acetyl |
| amino acid | H | Cl | OH | SH |
| amino acid | H | Cl | OH | SMe |
| amino acid | H | Cl | OH | SEt |
| amino acid | H | Cl | OH | S-cyclopropyl |
| amino acid | H | Cl | OH | F |
| amino acid | H | Cl | OH | Cl |
| amino acid | H | Cl | OH | Br |
| amino acid | H | Cl | OH | I |
| amino acid | acyl | Cl | OH | H |
| amino acid | acyl | Cl | OH | $NH_2$ |
| amino acid | acyl | Cl | OH | NH-cyclopropyl |
| amino acid | acyl | Cl | OH | NH-methyl |
| amino acid | acyl | Cl | OH | NH-ethyl |
| amino acid | acyl | Cl | OH | NH-acetyl |
| amino acid | acyl | Cl | OH | OH |
| amino acid | acyl | Cl | OH | OMe |
| amino acid | acyl | Cl | OH | OEt |
| amino acid | acyl | Cl | OH | O-cyclopropyl |
| amino acid | acyl | Cl | OH | O-acetyl |
| amino acid | acyl | Cl | OH | SH |
| amino acid | acyl | Cl | OH | SMe |
| amino acid | acyl | Cl | OH | SEt |
| amino acid | acyl | Cl | OH | S-cyclopropyl |
| amino acid | acyl | Cl | OH | F |
| amino acid | acyl | Cl | OH | Cl |
| amino acid | acyl | Cl | OH | Br |
| amino acid | acyl | Cl | OH | I |
| acyl | H | F | OH | H |
| acyl | H | F | OH | $NH_2$ |
| acyl | H | F | OH | NH-cyclopropyl |
| acyl | H | F | OH | NH-methyl |
| acyl | H | F | OH | NH-ethyl |
| acyl | H | F | OH | NH-acetyl |
| acyl | H | F | OH | OH |
| acyl | H | F | OH | OMe |
| acyl | H | F | OH | OEt |
| acyl | H | F | OH | O-cyclopropyl |
| acyl | H | F | OH | O-acetyl |
| acyl | H | F | OH | SH |
| acyl | H | F | OH | SMe |
| acyl | H | F | OH | SEt |
| acyl | H | F | OH | S-cyclopropyl |
| acyl | H | F | OH | F |
| acyl | H | F | OH | Cl |
| acyl | H | F | OH | Br |
| acyl | H | F | OH | I |
| acyl | acyl | F | OH | H |
| acyl | acyl | F | OH | $NH_2$ |
| acyl | acyl | F | OH | NH-cyclopropyl |
| acyl | acyl | F | OH | NH-methyl |
| acyl | acyl | F | OH | NH-ethyl |
| acyl | acyl | F | OH | NH-acetyl |
| acyl | acyl | F | OH | OH |
| acyl | acyl | F | OH | OMe |
| acyl | acyl | F | OH | OEt |
| acyl | acyl | F | OH | O-cyclopropyl |
| acyl | acyl | F | OH | O-acetyl |
| acyl | acyl | F | OH | SH |
| acyl | acyl | F | OH | SMe |
| acyl | acyl | F | OH | SEt |
| acyl | acyl | F | OH | S-cyclopropyl |

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TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | F | OH | F |
| acyl | acyl | F | OH | Cl |
| acyl | acyl | F | OH | Br |
| acyl | acyl | F | OH | I |
| acyl | amino acid | F | OH | H |
| acyl | amino acid | F | OH | $NH_2$ |
| acyl | amino acid | F | OH | NH-cyclopropyl |
| acyl | amino acid | F | OH | NH-methyl |
| acyl | amino acid | F | OH | NH-ethyl |
| acyl | amino acid | F | OH | NH-acetyl |
| acyl | amino acid | F | OH | OH |
| acyl | amino acid | F | OH | OMe |
| acyl | amino acid | F | OH | OEt |
| acyl | amino acid | F | OH | O-cyclopropyl |
| acyl | amino acid | F | OH | O-acetyl |
| acyl | amino acid | F | OH | SH |
| acyl | amino acid | F | OH | SMe |
| acyl | amino acid | F | OH | SEt |
| acyl | amino acid | F | OH | S-cyclopropyl |
| acyl | amino acid | F | OH | F |
| acyl | amino acid | F | OH | Cl |
| acyl | amino acid | F | OH | Br |
| acyl | amino acid | F | OH | I |
| H | acyl | F | OH | H |
| H | acyl | F | OH | $NH_2$ |
| H | acyl | F | OH | NH-cyclopropyl |
| H | acyl | F | OH | NH-methyl |
| H | acyl | F | OH | NH-ethyl |
| H | acyl | F | OH | NH-acetyl |
| H | acyl | F | OH | OH |
| H | acyl | F | OH | OMe |
| H | acyl | F | OH | OEt |
| H | acyl | F | OH | O-cyclopropyl |
| H | acyl | F | OH | O-acetyl |
| H | acyl | F | OH | SH |
| H | acyl | F | OH | SMe |
| H | acyl | F | OH | SEt |
| H | acyl | F | OH | S-cyclopropyl |
| H | acyl | F | OH | F |
| H | acyl | F | OH | Cl |
| H | acyl | F | OH | Br |
| H | acyl | F | OH | I |
| H | amino acid | F | OH | H |
| H | amino acid | F | OH | $NH_2$ |
| H | amino acid | F | OH | NH-cyclopropyl |
| H | amino acid | F | OH | NH-methyl |
| H | amino acid | F | OH | NH-ethyl |
| H | amino acid | F | OH | NH-acetyl |
| H | amino acid | F | OH | OH |
| H | amino acid | F | OH | OMe |
| H | amino acid | F | OH | OEt |
| H | amino acid | F | OH | O-cyclopropyl |
| H | amino acid | F | OH | O-acetyl |
| H | amino acid | F | OH | SH |
| H | amino acid | F | OH | SMe |
| H | amino acid | F | OH | SEt |
| H | amino acid | F | OH | S-cyclopropyl |
| H | amino acid | F | OH | F |
| H | amino acid | F | OH | Cl |
| H | amino acid | F | OH | Br |
| H | amino acid | F | OH | I |
| amino acid | amino acid | F | OH | H |
| amino acid | amino acid | F | OH | $NH_2$ |
| amino acid | amino acid | F | OH | NH-cyclopropyl |
| amino acid | amino acid | F | OH | NH-methyl |
| amino acid | amino acid | F | OH | NH-ethyl |
| amino acid | amino acid | F | OH | NH-acetyl |
| amino acid | amino acid | F | OH | OH |
| amino acid | amino acid | F | OH | OMe |
| amino acid | amino acid | F | OH | OEt |
| amino acid | amino acid | F | OH | O-cyclopropyl |
| amino acid | amino acid | F | OH | O-acetyl |
| amino acid | amino acid | F | OH | SH |
| amino acid | amino acid | F | OH | SMe |
| amino acid | amino acid | F | OH | SEt |
| amino acid | amino acid | F | OH | S-cyclopropyl |
| amino acid | amino acid | F | OH | F |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | F | OH | Cl |
| amino acid | amino acid | F | OH | Br |
| amino acid | amino acid | F | OH | I |
| amino acid | H | F | OH | H |
| amino acid | H | F | OH | $NH_2$ |
| amino acid | H | F | OH | NH-cyclopropyl |
| amino acid | H | F | OH | NH-methyl |
| amino acid | H | F | OH | NH-ethyl |
| amino acid | H | F | OH | NH-acetyl |
| amino acid | H | F | OH | OH |
| amino acid | H | F | OH | OMe |
| amino acid | H | F | OH | OEt |
| amino acid | H | F | OH | O-cyclopropyl |
| amino acid | H | F | OH | O-acetyl |
| amino acid | H | F | OH | SH |
| amino acid | H | F | OH | SMe |
| amino acid | H | F | OH | SEt |
| amino acid | H | F | OH | S-cyclopropyl |
| amino acid | H | F | OH | F |
| amino acid | H | F | OH | Cl |
| amino acid | H | F | OH | Br |
| amino acid | H | F | OH | I |
| amino acid | acyl | F | OH | H |
| amino acid | acyl | F | OH | $NH_2$ |
| amino acid | acyl | F | OH | NH-cyclopropyl |
| amino acid | acyl | F | OH | NH-methyl |
| amino acid | acyl | F | OH | NH-ethyl |
| amino acid | acyl | F | OH | NH-acetyl |
| amino acid | acyl | F | OH | OH |
| amino acid | acyl | F | OH | OMe |
| amino acid | acyl | F | OH | OEt |
| amino acid | acyl | F | OH | O-cyclopropyl |
| amino acid | acyl | F | OH | O-acetyl |
| amino acid | acyl | F | OH | SH |
| amino acid | acyl | F | OH | SMe |
| amino acid | acyl | F | OH | SEt |
| amino acid | acyl | F | OH | S-cyclopropyl |
| amino acid | acyl | F | OH | F |
| amino acid | acyl | F | OH | Cl |
| amino acid | acyl | F | OH | Br |
| amino acid | acyl | F | OH | I |
| acyl | H | $NH_2$ | OH | H |
| acyl | H | $NH_2$ | OH | $NH_2$ |
| acyl | H | $NH_2$ | OH | NH-cyclopropyl |
| acyl | H | $NH_2$ | OH | NH-methyl |
| acyl | H | $NH_2$ | OH | NH-ethyl |
| acyl | H | $NH_2$ | OH | NH-acetyl |
| acyl | H | $NH_2$ | OH | OH |
| acyl | H | $NH_2$ | OH | OMe |
| acyl | H | $NH_2$ | OH | OEt |
| acyl | H | $NH_2$ | OH | O-cyclopropyl |
| acyl | H | $NH_2$ | OH | O-acetyl |
| acyl | H | $NH_2$ | OH | SH |
| acyl | H | $NH_2$ | OH | SMe |
| acyl | H | $NH_2$ | OH | SEt |
| acyl | H | $NH_2$ | OH | S-cyclopropyl |
| acyl | H | $NH_2$ | OH | F |
| acyl | H | $NH_2$ | OH | Cl |
| acyl | H | $NH_2$ | OH | Br |
| acyl | H | $NH_2$ | OH | I |
| acyl | acyl | $NH_2$ | OH | H |
| acyl | acyl | $NH_2$ | OH | $NH_2$ |
| acyl | acyl | $NH_2$ | OH | NH-cyclopropyl |
| acyl | acyl | $NH_2$ | OH | NH-methyl |
| acyl | acyl | $NH_2$ | OH | NH-ethyl |
| acyl | acyl | $NH_2$ | OH | NH-acetyl |
| acyl | acyl | $NH_2$ | OH | OH |
| acyl | acyl | $NH_2$ | OH | OMe |
| acyl | acyl | $NH_2$ | OH | OEt |
| acyl | acyl | $NH_2$ | OH | O-cyclopropyl |
| acyl | acyl | $NH_2$ | OH | O-acetyl |
| acyl | acyl | $NH_2$ | OH | SH |
| acyl | acyl | $NH_2$ | OH | SMe |
| acyl | acyl | $NH_2$ | OH | SEt |
| acyl | acyl | $NH_2$ | OH | S-cyclopropyl |
| acyl | acyl | $NH_2$ | OH | F |
| acyl | acyl | $NH_2$ | OH | Cl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | $NH_2$ | OH | Br |
| acyl | acyl | $NH_2$ | OH | I |
| acyl | amino acid | $NH_2$ | OH | H |
| acyl | amino acid | $NH_2$ | OH | $NH_2$ |
| acyl | amino acid | $NH_2$ | OH | NH-cyclopropyl |
| acyl | amino acid | $NH_2$ | OH | NH-methyl |
| acyl | amino acid | $NH_2$ | OH | NH-ethyl |
| acyl | amino acid | $NH_2$ | OH | NH-acetyl |
| acyl | amino acid | $NH_2$ | OH | OH |
| acyl | amino acid | $NH_2$ | OH | OMe |
| acyl | amino acid | $NH_2$ | OH | OEt |
| acyl | amino acid | $NH_2$ | OH | O-cyclopropyl |
| acyl | amino acid | $NH_2$ | OH | O-acetyl |
| acyl | amino acid | $NH_2$ | OH | SH |
| acyl | amino acid | $NH_2$ | OH | SMe |
| acyl | amino acid | $NH_2$ | OH | SEt |
| acyl | amino acid | $NH_2$ | OH | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | OH | F |
| acyl | amino acid | $NH_2$ | OH | Cl |
| acyl | amino acid | $NH_2$ | OH | Br |
| acyl | amino acid | $NH_2$ | OH | I |
| H | acyl | $NH_2$ | OH | H |
| H | acyl | $NH_2$ | OH | $NH_2$ |
| H | acyl | $NH_2$ | OH | NH-cyclopropyl |
| H | acyl | $NH_2$ | OH | NH-methyl |
| H | acyl | $NH_2$ | OH | NH-ethyl |
| H | acyl | $NH_2$ | OH | NH-acetyl |
| H | acyl | $NH_2$ | OH | OH |
| H | acyl | $NH_2$ | OH | OMe |
| H | acyl | $NH_2$ | OH | OEt |
| H | acyl | $NH_2$ | OH | O-cyclopropyl |
| H | acyl | $NH_2$ | OH | O-acetyl |
| H | acyl | $NH_2$ | OH | SH |
| H | acyl | $NH_2$ | OH | SMe |
| H | acyl | $NH_2$ | OH | SEt |
| H | acyl | $NH_2$ | OH | S-cyclopropyl |
| H | acyl | $NH_2$ | OH | F |
| H | acyl | $NH_2$ | OH | Cl |
| H | acyl | $NH_2$ | OH | Br |
| H | acyl | $NH_2$ | OH | I |
| H | amino acid | $NH_2$ | OH | H |
| H | amino acid | $NH_2$ | OH | $NH_2$ |
| H | amino acid | $NH_2$ | OH | NH-cyclopropyl |
| H | amino acid | $NH_2$ | OH | NH-methyl |
| H | amino acid | $NH_2$ | OH | NH-ethyl |
| H | amino acid | $NH_2$ | OH | NH-acetyl |
| H | amino acid | $NH_2$ | OH | OH |
| H | amino acid | $NH_2$ | OH | OMe |
| H | amino acid | $NH_2$ | OH | OEt |
| H | amino acid | $NH_2$ | OH | O-cyclopropyl |
| H | amino acid | $NH_2$ | OH | O-acetyl |
| H | amino acid | $NH_2$ | OH | SH |
| H | amino acid | $NH_2$ | OH | SMe |
| H | amino acid | $NH_2$ | OH | SEt |
| H | amino acid | $NH_2$ | OH | S-cyclopropyl |
| H | amino acid | $NH_2$ | OH | F |
| H | amino acid | $NH_2$ | OH | Cl |
| H | amino acid | $NH_2$ | OH | Br |
| H | amino acid | $NH_2$ | OH | I |
| amino acid | amino acid | $NH_2$ | OH | H |
| amino acid | amino acid | $NH_2$ | OH | $NH_2$ |
| amino acid | amino acid | $NH_2$ | OH | NH-cyclopropyl |
| amino acid | amino acid | $NH_2$ | OH | NH-methyl |
| amino acid | amino acid | $NH_2$ | OH | NH-ethyl |
| amino acid | amino acid | $NH_2$ | OH | NH-acetyl |
| amino acid | amino acid | $NH_2$ | OH | OH |
| amino acid | amino acid | $NH_2$ | OH | OMe |
| amino acid | amino acid | $NH_2$ | OH | OEt |
| amino acid | amino acid | $NH_2$ | OH | O-cyclopropyl |
| amino acid | amino acid | $NH_2$ | OH | O-acetyl |
| amino acid | amino acid | $NH_2$ | OH | SH |
| amino acid | amino acid | $NH_2$ | OH | SMe |
| amino acid | amino acid | $NH_2$ | OH | SEt |
| amino acid | amino acid | $NH_2$ | OH | S-cyclopropyl |
| amino acid | amino acid | $NH_2$ | OH | F |
| amino acid | amino acid | $NH_2$ | OH | Cl |
| amino acid | amino acid | $NH_2$ | OH | Br |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | $NH_2$ | OH | I |
| amino acid | H | $NH_2$ | OH | H |
| amino acid | H | $NH_2$ | OH | $NH_2$ |
| amino acid | H | $NH_2$ | OH | NH-cyclopropyl |
| amino acid | H | $NH_2$ | OH | NH-methyl |
| amino acid | H | $NH_2$ | OH | NH-ethyl |
| amino acid | H | $NH_2$ | OH | NH-acetyl |
| amino acid | H | $NH_2$ | OH | OH |
| amino acid | H | $NH_2$ | OH | OMe |
| amino acid | H | $NH_2$ | OH | OEt |
| amino acid | H | $NH_2$ | OH | O-cyclopropyl |
| amino acid | H | $NH_2$ | OH | O-acetyl |
| amino acid | H | $NH_2$ | OH | SH |
| amino acid | H | $NH_2$ | OH | SMe |
| amino acid | H | $NH_2$ | OH | SEt |
| amino acid | H | $NH_2$ | OH | S-cyclopropyl |
| amino acid | H | $NH_2$ | OH | F |
| amino acid | H | $NH_2$ | OH | Cl |
| amino acid | H | $NH_2$ | OH | Br |
| amino acid | H | $NH_2$ | OH | I |
| amino acid | acyl | $NH_2$ | OH | H |
| amino acid | acyl | $NH_2$ | OH | $NH_2$ |
| amino acid | acyl | $NH_2$ | OH | NH-cyclopropyl |
| amino acid | acyl | $NH_2$ | OH | NH-methyl |
| amino acid | acyl | $NH_2$ | OH | NH-ethyl |
| amino acid | acyl | $NH_2$ | OH | NH-acetyl |
| amino acid | acyl | $NH_2$ | OH | OH |
| amino acid | acyl | $NH_2$ | OH | OMe |
| amino acid | acyl | $NH_2$ | OH | OEt |
| amino acid | acyl | $NH_2$ | OH | O-cyclopropyl |
| amino acid | acyl | $NH_2$ | OH | O-acetyl |
| amino acid | acyl | $NH_2$ | OH | SH |
| amino acid | acyl | $NH_2$ | OH | SMe |
| amino acid | acyl | $NH_2$ | OH | SEt |
| amino acid | acyl | $NH_2$ | OH | S-cyclopropyl |
| amino acid | acyl | $NH_2$ | OH | F |
| amino acid | acyl | $NH_2$ | OH | Cl |
| amino acid | acyl | $NH_2$ | OH | Br |
| amino acid | acyl | $NH_2$ | OH | I |
| acyl | H | SH | OH | H |
| acyl | H | SH | OH | $NH_2$ |
| acyl | H | SH | OH | NH-cyclopropyl |
| acyl | H | SH | OH | NH-methyl |
| acyl | H | SH | OH | NH-ethyl |
| acyl | H | SH | OH | NH-acetyl |
| acyl | H | SH | OH | OH |
| acyl | H | SH | OH | OMe |
| acyl | H | SH | OH | OEt |
| acyl | H | SH | OH | O-cyclopropyl |
| acyl | H | SH | OH | O-acetyl |
| acyl | H | SH | OH | SH |
| acyl | H | SH | OH | SMe |
| acyl | H | SH | OH | SEt |
| acyl | H | SH | OH | S-cyclopropyl |
| acyl | H | SH | OH | F |
| acyl | H | SH | OH | Cl |
| acyl | H | SH | OH | Br |
| acyl | H | SH | OH | I |
| acyl | acyl | SH | OH | H |
| acyl | acyl | SH | OH | $NH_2$ |
| acyl | acyl | SH | OH | NH-cyclopropyl |
| acyl | acyl | SH | OH | NH-methyl |
| acyl | acyl | SH | OH | NH-ethyl |
| acyl | acyl | SH | OH | NH-acetyl |
| acyl | acyl | SH | OH | OH |
| acyl | acyl | SH | OH | OMe |
| acyl | acyl | SH | OH | OEt |
| acyl | acyl | SH | OH | O-cyclopropyl |
| acyl | acyl | SH | OH | O-acetyl |
| acyl | acyl | SH | OH | SH |
| acyl | acyl | SH | OH | SMe |
| acyl | acyl | SH | OH | SEt |
| acyl | acyl | SH | OH | S-cyclopropyl |
| acyl | acyl | SH | OH | F |
| acyl | acyl | SH | OH | Cl |
| acyl | acyl | SH | OH | Br |
| acyl | acyl | SH | OH | I |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | SH | OH | H |
| acyl | amino acid | SH | OH | $NH_2$ |
| acyl | amino acid | SH | OH | NH-cyclopropyl |
| acyl | amino acid | SH | OH | NH-methyl |
| acyl | amino acid | SH | OH | NH-ethyl |
| acyl | amino acid | SH | OH | NH-acetyl |
| acyl | amino acid | SH | OH | OH |
| acyl | amino acid | SH | OH | OMe |
| acyl | amino acid | SH | OH | OEt |
| acyl | amino acid | SH | OH | O-cyclopropyl |
| acyl | amino acid | SH | OH | O-acetyl |
| acyl | amino acid | SH | OH | SH |
| acyl | amino acid | SH | OH | SMe |
| acyl | amino acid | SH | OH | SEt |
| acyl | amino acid | SH | OH | S-cyclopropyl |
| acyl | amino acid | SH | OH | F |
| acyl | amino acid | SH | OH | Cl |
| acyl | amino acid | SH | OH | Br |
| acyl | amino acid | SH | OH | I |
| H | acyl | SH | OH | H |
| H | acyl | SH | OH | $NH_2$ |
| H | acyl | SH | OH | NH-cyclopropyl |
| H | acyl | SH | OH | NH-methyl |
| H | acyl | SH | OH | NH-ethyl |
| H | acyl | SH | OH | NH-acetyl |
| H | acyl | SH | OH | OH |
| H | acyl | SH | OH | OMe |
| H | acyl | SH | OH | OEt |
| H | acyl | SH | OH | O-cyclopropyl |
| H | acyl | SH | OH | O-acetyl |
| H | acyl | SH | OH | SH |
| H | acyl | SH | OH | SMe |
| H | acyl | SH | OH | SEt |
| H | acyl | SH | OH | S-cyclopropyl |
| H | acyl | SH | OH | F |
| H | acyl | SH | OH | Cl |
| H | acyl | SH | OH | Br |
| H | acyl | SH | OH | I |
| H | amino acid | SH | OH | H |
| H | amino acid | SH | OH | $NH_2$ |
| H | amino acid | SH | OH | NH-cyclopropyl |
| H | amino acid | SH | OH | NH-methyl |
| H | amino acid | SH | OH | NH-ethyl |
| H | amino acid | SH | OH | NH-acetyl |
| H | amino acid | SH | OH | OH |
| H | amino acid | SH | OH | OMe |
| H | amino acid | SH | OH | OEt |
| H | amino acid | SH | OH | O-cyclopropyl |
| H | amino acid | SH | OH | O-acetyl |
| H | amino acid | SH | OH | SH |
| H | amino acid | SH | OH | SMe |
| H | amino acid | SH | OH | SEt |
| H | amino acid | SH | OH | S-cyclopropyl |
| H | amino acid | SH | OH | F |
| H | amino acid | SH | OH | Cl |
| H | amino acid | SH | OH | Br |
| H | amino acid | SH | OH | I |
| amino acid | amino acid | SH | OH | H |
| amino acid | amino acid | SH | OH | $NH_2$ |
| amino acid | amino acid | SH | OH | NH-cyclopropyl |
| amino acid | amino acid | SH | OH | NH-methyl |
| amino acid | amino acid | SH | OH | NH-ethyl |
| amino acid | amino acid | SH | OH | NH-acetyl |
| amino acid | amino acid | SH | OH | OH |
| amino acid | amino acid | SH | OH | OMe |
| amino acid | amino acid | SH | OH | OEt |
| amino acid | amino acid | SH | OH | O-cyclopropyl |
| amino acid | amino acid | SH | OH | O-acetyl |
| amino acid | amino acid | SH | OH | SH |
| amino acid | amino acid | SH | OH | SMe |
| amino acid | amino acid | SH | OH | SEt |
| amino acid | amino acid | SH | OH | S-cyclopropyl |
| amino acid | amino acid | SH | OH | F |
| amino acid | amino acid | SH | OH | Cl |
| amino acid | amino acid | SH | OH | Br |
| amino acid | amino acid | SH | OH | I |
| amino acid | H | SH | OH | H |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | SH | OH | $NH_2$ |
| amino acid | H | SH | OH | NH-cyclopropyl |
| amino acid | H | SH | OH | NH-methyl |
| amino acid | H | SH | OH | NH-ethyl |
| amino acid | H | SH | OH | NH-acetyl |
| amino acid | H | SH | OH | OH |
| amino acid | H | SH | OH | OMe |
| amino acid | H | SH | OH | OEt |
| amino acid | H | SH | OH | O-cyclopropyl |
| amino acid | H | SH | OH | O-acetyl |
| amino acid | H | SH | OH | SH |
| amino acid | H | SH | OH | SMe |
| amino acid | H | SH | OH | SEt |
| amino acid | H | SH | OH | S-cyclopropyl |
| amino acid | H | SH | OH | F |
| amino acid | H | SH | OH | Cl |
| amino acid | H | SH | OH | Br |
| amino acid | H | SH | OH | I |
| amino acid | acyl | SH | OH | H |
| amino acid | acyl | SH | OH | $NH_2$ |
| amino acid | acyl | SH | OH | NH-cyclopropyl |
| amino acid | acyl | SH | OH | NH-methyl |
| amino acid | acyl | SH | OH | NH-ethyl |
| amino acid | acyl | SH | OH | NH-acetyl |
| amino acid | acyl | SH | OH | OH |
| amino acid | acyl | SH | OH | OMe |
| amino acid | acyl | SH | OH | OEt |
| amino acid | acyl | SH | OH | O-cyclopropyl |
| amino acid | acyl | SH | OH | O-acetyl |
| amino acid | acyl | SH | OH | SH |
| amino acid | acyl | SH | OH | SMe |
| amino acid | acyl | SH | OH | SEt |
| amino acid | acyl | SH | OH | S-cyclopropyl |
| amino acid | acyl | SH | OH | F |
| amino acid | acyl | SH | OH | Cl |
| amino acid | acyl | SH | OH | Br |
| amino acid | acyl | SH | OH | I |
| acyl | H | OH | OH | H |
| acyl | H | OH | OH | $NH_2$ |
| acyl | H | OH | OH | NH-cyclopropyl |
| acyl | H | OH | OH | NH-methyl |
| acyl | H | OH | OH | NH-ethyl |
| acyl | H | OH | OH | NH-acetyl |
| acyl | H | OH | OH | OH |
| acyl | H | OH | OH | OMe |
| acyl | H | OH | OH | OEt |
| acyl | H | OH | OH | O-cyclopropyl |
| acyl | H | OH | OH | O-acetyl |
| acyl | H | OH | OH | SH |
| acyl | H | OH | OH | SMe |
| acyl | H | OH | OH | SEt |
| acyl | H | OH | OH | S-cyclopropyl |
| acyl | H | OH | OH | F |
| acyl | H | OH | OH | Cl |
| acyl | H | OH | OH | Br |
| acyl | H | OH | OH | I |
| acyl | acyl | OH | OH | H |
| acyl | acyl | OH | OH | $NH_2$ |
| acyl | acyl | OH | OH | NH-cyclopropyl |
| acyl | acyl | OH | OH | NH-methyl |
| acyl | acyl | OH | OH | NH-ethyl |
| acyl | acyl | OH | OH | NH-acetyl |
| acyl | acyl | OH | OH | OH |
| acyl | acyl | OH | OH | OMe |
| acyl | acyl | OH | OH | OEt |
| acyl | acyl | OH | OH | O-cyclopropyl |
| acyl | acyl | OH | OH | O-acetyl |
| acyl | acyl | OH | OH | SH |
| acyl | acyl | OH | OH | SMe |
| acyl | acyl | OH | OH | SEt |
| acyl | acyl | OH | OH | S-cyclopropyl |
| acyl | acyl | OH | OH | F |
| acyl | acyl | OH | OH | Cl |
| acyl | acyl | OH | OH | Br |
| acyl | acyl | OH | OH | I |
| acyl | amino acid | OH | OH | H |
| acyl | amino acid | OH | OH | $NH_2$ |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | OH | OH | NH-cyclopropyl |
| acyl | amino acid | OH | OH | NH-methyl |
| acyl | amino acid | OH | OH | NH-ethyl |
| acyl | amino acid | OH | OH | NH-acetyl |
| acyl | amino acid | OH | OH | OH |
| acyl | amino acid | OH | OH | OMe |
| acyl | amino acid | OH | OH | OEt |
| acyl | amino acid | OH | OH | O-cyclopropyl |
| acyl | amino acid | OH | OH | O-acetyl |
| acyl | amino acid | OH | OH | SH |
| acyl | amino acid | OH | OH | SMe |
| acyl | amino acid | OH | OH | SEt |
| acyl | amino acid | OH | OH | S-cyclopropyl |
| acyl | amino acid | OH | OH | F |
| acyl | amino acid | OH | OH | Cl |
| acyl | amino acid | OH | OH | Br |
| acyl | amino acid | OH | OH | I |
| H | acyl | OH | OH | H |
| H | acyl | OH | OH | $NH_2$ |
| H | acyl | OH | OH | NH-cyclopropyl |
| H | acyl | OH | OH | NH-methyl |
| H | acyl | OH | OH | NH-ethyl |
| H | acyl | OH | OH | NH-acetyl |
| H | acyl | OH | OH | OH |
| H | acyl | OH | OH | OMe |
| H | acyl | OH | OH | OEt |
| H | acyl | OH | OH | O-cyclopropyl |
| H | acyl | OH | OH | O-acetyl |
| H | acyl | OH | OH | SH |
| H | acyl | OH | OH | SMe |
| H | acyl | OH | OH | SEt |
| H | acyl | OH | OH | S-cyclopropyl |
| H | acyl | OH | OH | F |
| H | acyl | OH | OH | Cl |
| H | acyl | OH | OH | Br |
| H | acyl | OH | OH | I |
| H | amino acid | OH | OH | H |
| H | amino acid | OH | OH | $NH_2$ |
| H | amino acid | OH | OH | NH-cyclopropyl |
| H | amino acid | OH | OH | NH-methyl |
| H | amino acid | OH | OH | NH-ethyl |
| H | amino acid | OH | OH | NH-acetyl |
| H | amino acid | OH | OH | OH |
| H | amino acid | OH | OH | OMe |
| H | amino acid | OH | OH | OEt |
| H | amino acid | OH | OH | O-cyclopropyl |
| H | amino acid | OH | OH | O-acetyl |
| H | amino acid | OH | OH | SH |
| H | amino acid | OH | OH | SMe |
| H | amino acid | OH | OH | SEt |
| H | amino acid | OH | OH | S-cyclopropyl |
| H | amino acid | OH | OH | F |
| H | amino acid | OH | OH | Cl |
| H | amino acid | OH | OH | Br |
| H | amino acid | OH | OH | I |
| amino acid | amino acid | OH | OH | H |
| amino acid | amino acid | OH | OH | $NH_2$ |
| amino acid | amino acid | OH | OH | NH-cyclopropyl |
| amino acid | amino acid | OH | OH | NH-methyl |
| amino acid | amino acid | OH | OH | NH-ethyl |
| amino acid | amino acid | OH | OH | NH-acetyl |
| amino acid | amino acid | OH | OH | OH |
| amino acid | amino acid | OH | OH | OMe |
| amino acid | amino acid | OH | OH | OEt |
| amino acid | amino acid | OH | OH | O-cyclopropyl |
| amino acid | amino acid | OH | OH | O-acetyl |
| amino acid | amino acid | OH | OH | SH |
| amino acid | amino acid | OH | OH | SMe |
| amino acid | amino acid | OH | OH | SEt |
| amino acid | amino acid | OH | OH | S-cyclopropyl |
| amino acid | amino acid | OH | OH | F |
| amino acid | amino acid | OH | OH | Cl |
| amino acid | amino acid | OH | OH | Br |
| amino acid | amino acid | OH | OH | I |
| amino acid | H | OH | OH | H |
| amino acid | H | OH | OH | $NH_2$ |
| amino acid | H | OH | OH | NH-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | OH | OH | NH-methyl |
| amino acid | H | OH | OH | NH-ethyl |
| amino acid | H | OH | OH | NH-acetyl |
| amino acid | H | OH | OH | OH |
| amino acid | H | OH | OH | OMe |
| amino acid | H | OH | OH | OEt |
| amino acid | H | OH | OH | O-cyclopropyl |
| amino acid | H | OH | OH | O-acetyl |
| amino acid | H | OH | OH | SH |
| amino acid | H | OH | OH | SMe |
| amino acid | H | OH | OH | SEt |
| amino acid | H | OH | OH | S-cyclopropyl |
| amino acid | H | OH | OH | F |
| amino acid | H | OH | OH | Cl |
| amino acid | H | OH | OH | Br |
| amino acid | H | OH | OH | I |
| amino acid | acyl | OH | OH | H |
| amino acid | acyl | OH | OH | $NH_2$ |
| amino acid | acyl | OH | OH | NH-cyclopropyl |
| amino acid | acyl | OH | OH | NH-methyl |
| amino acid | acyl | OH | OH | NH-ethyl |
| amino acid | acyl | OH | OH | NH-acetyl |
| amino acid | acyl | OH | OH | OH |
| amino acid | acyl | OH | OH | OMe |
| amino acid | acyl | OH | OH | OEt |
| amino acid | acyl | OH | OH | O-cyclopropyl |
| amino acid | acyl | OH | OH | O-acetyl |
| amino acid | acyl | OH | OH | SH |
| amino acid | acyl | OH | OH | SMe |
| amino acid | acyl | OH | OH | SEt |
| amino acid | acyl | OH | OH | S-cyclopropyl |
| amino acid | acyl | OH | OH | F |
| amino acid | acyl | OH | OH | Cl |
| amino acid | acyl | OH | OH | Br |
| amino acid | acyl | OH | OH | I |
| acyl | H | $CH_3$ | H | H |
| acyl | H | $CH_3$ | H | $NH_2$ |
| acyl | H | $CH_3$ | H | NH-cyclopropyl |
| acyl | H | $CH_3$ | H | NH-methyl |
| acyl | H | $CH_3$ | H | NH-ethyl |
| acyl | H | $CH_3$ | H | NH-acetyl |
| acyl | H | $CH_3$ | H | OH |
| acyl | H | $CH_3$ | H | OMe |
| acyl | H | $CH_3$ | H | OEt |
| acyl | H | $CH_3$ | H | O-cyclopropyl |
| acyl | H | $CH_3$ | H | O-acetyl |
| acyl | H | $CH_3$ | H | SH |
| acyl | H | $CH_3$ | H | SMe |
| acyl | H | $CH_3$ | H | SEt |
| acyl | H | $CH_3$ | H | S-cyclopropyl |
| acyl | H | $CH_3$ | H | F |
| acyl | H | $CH_3$ | H | Cl |
| acyl | H | $CH_3$ | H | Br |
| acyl | H | $CH_3$ | H | I |
| acyl | acyl | $CH_3$ | H | H |
| acyl | acyl | $CH_3$ | H | $NH_2$ |
| acyl | acyl | $CH_3$ | H | NH-cyclopropyl |
| acyl | acyl | $CH_3$ | H | NH-methyl |
| acyl | acyl | $CH_3$ | H | NH-ethyl |
| acyl | acyl | $CH_3$ | H | NH-acetyl |
| acyl | acyl | $CH_3$ | H | OH |
| acyl | acyl | $CH_3$ | H | OMe |
| acyl | acyl | $CH_3$ | H | OEt |
| acyl | acyl | $CH_3$ | H | O-cyclopropyl |
| acyl | acyl | $CH_3$ | H | O-acetyl |
| acyl | acyl | $CH_3$ | H | SH |
| acyl | acyl | $CH_3$ | H | SMe |
| acyl | acyl | $CH_3$ | H | SEt |
| acyl | acyl | $CH_3$ | H | S-cyclopropyl |
| acyl | acyl | $CH_3$ | H | F |
| acyl | acyl | $CH_3$ | H | Cl |
| acyl | acyl | $CH_3$ | H | Br |
| acyl | acyl | $CH_3$ | H | I |
| acyl | amino acid | $CH_3$ | H | H |
| acyl | amino acid | $CH_3$ | H | $NH_2$ |
| acyl | amino acid | $CH_3$ | H | NH-cyclopropyl |
| acyl | amino acid | $CH_3$ | H | NH-methyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | $CH_3$ | H | NH-ethyl |
| acyl | amino acid | $CH_3$ | H | NH-acetyl |
| acyl | amino acid | $CH_3$ | H | OH |
| acyl | amino acid | $CH_3$ | H | OMe |
| acyl | amino acid | $CH_3$ | H | OEt |
| acyl | amino acid | $CH_3$ | H | O-cyclopropyl |
| acyl | amino acid | $CH_3$ | H | O-acetyl |
| acyl | amino acid | $CH_3$ | H | SH |
| acyl | amino acid | $CH_3$ | H | SMe |
| acyl | amino acid | $CH_3$ | H | SEt |
| acyl | amino acid | $CH_3$ | H | S-cyclopropyl |
| acyl | amino acid | $CH_3$ | H | F |
| acyl | amino acid | $CH_3$ | H | Cl |
| acyl | amino acid | $CH_3$ | H | Br |
| acyl | amino acid | $CH_3$ | H | I |
| H | acyl | $CH_3$ | H | H |
| H | acyl | $CH_3$ | H | $NH_2$ |
| H | acyl | $CH_3$ | H | NH-cyclopropyl |
| H | acyl | $CH_3$ | H | NH-methyl |
| H | acyl | $CH_3$ | H | NH-ethyl |
| H | acyl | $CH_3$ | H | NH-acetyl |
| H | acyl | $CH_3$ | H | OH |
| H | acyl | $CH_3$ | H | OMe |
| H | acyl | $CH_3$ | H | OEt |
| H | acyl | $CH_3$ | H | O-cyclopropyl |
| H | acyl | $CH_3$ | H | O-acetyl |
| H | acyl | $CH_3$ | H | SH |
| H | acyl | $CH_3$ | H | SMe |
| H | acyl | $CH_3$ | H | SEt |
| H | acyl | $CH_3$ | H | S-cyclopropyl |
| H | acyl | $CH_3$ | H | F |
| H | acyl | $CH_3$ | H | Cl |
| H | acyl | $CH_3$ | H | Br |
| H | acyl | $CH_3$ | H | I |
| H | amino acid | $CH_3$ | H | H |
| H | amino acid | $CH_3$ | H | $NH_2$ |
| H | amino acid | $CH_3$ | H | NH-cyclopropyl |
| H | amino acid | $CH_3$ | H | NH-methyl |
| H | amino acid | $CH_3$ | H | NH-ethyl |
| H | amino acid | $CH_3$ | H | NH-acetyl |
| H | amino acid | $CH_3$ | H | OH |
| H | amino acid | $CH_3$ | H | OMe |
| H | amino acid | $CH_3$ | H | OEt |
| H | amino acid | $CH_3$ | H | O-cyclopropyl |
| H | amino acid | $CH_3$ | H | O-acetyl |
| H | amino acid | $CH_3$ | H | SH |
| H | amino acid | $CH_3$ | H | SMe |
| H | amino acid | $CH_3$ | H | SEt |
| H | amino acid | $CH_3$ | H | S-cyclopropyl |
| H | amino acid | $CH_3$ | H | F |
| H | amino acid | $CH_3$ | H | Cl |
| H | amino acid | $CH_3$ | H | Br |
| H | amino acid | $CH_3$ | H | I |
| amino acid | amino acid | $CH_3$ | H | H |
| amino acid | amino acid | $CH_3$ | H | $NH_2$ |
| amino acid | amino acid | $CH_3$ | H | NH-cyclopropyl |
| amino acid | amino acid | $CH_3$ | H | NH-methyl |
| amino acid | amino acid | $CH_3$ | H | NH-ethyl |
| amino acid | amino acid | $CH_3$ | H | NH-acetyl |
| amino acid | amino acid | $CH_3$ | H | OH |
| amino acid | amino acid | $CH_3$ | H | OMe |
| amino acid | amino acid | $CH_3$ | H | OEt |
| amino acid | amino acid | $CH_3$ | H | O-cyclopropyl |
| amino acid | amino acid | $CH_3$ | H | O-acetyl |
| amino acid | amino acid | $CH_3$ | H | SH |
| amino acid | amino acid | $CH_3$ | H | SMe |
| amino acid | amino acid | $CH_3$ | H | SEt |
| amino acid | amino acid | $CH_3$ | H | S-cyclopropyl |
| amino acid | amino acid | $CH_3$ | H | F |
| amino acid | amino acid | $CH_3$ | H | Cl |
| amino acid | amino acid | $CH_3$ | H | Br |
| amino acid | amino acid | $CH_3$ | H | I |
| amino acid | H | $CH_3$ | H | H |
| amino acid | H | $CH_3$ | H | $NH_2$ |
| amino acid | H | $CH_3$ | H | NH-cyclopropyl |
| amino acid | H | $CH_3$ | H | NH-methyl |
| amino acid | H | $CH_3$ | H | NH-ethyl |
| amino acid | H | $CH_3$ | H | NH-acetyl |
| amino acid | H | $CH_3$ | H | OH |
| amino acid | H | $CH_3$ | H | OMe |
| amino acid | H | $CH_3$ | H | OEt |
| amino acid | H | $CH_3$ | H | O-cyclopropyl |
| amino acid | H | $CH_3$ | H | O-acetyl |
| amino acid | H | $CH_3$ | H | SH |
| amino acid | H | $CH_3$ | H | SMe |
| amino acid | H | $CH_3$ | H | SEt |
| amino acid | H | $CH_3$ | H | S-cyclopropyl |
| amino acid | H | $CH_3$ | H | F |
| amino acid | H | $CH_3$ | H | Cl |
| amino acid | H | $CH_3$ | H | Br |
| amino acid | H | $CH_3$ | H | I |
| amino acid | acyl | $CH_3$ | H | H |
| amino acid | acyl | $CH_3$ | H | $NH_2$ |
| amino acid | acyl | $CH_3$ | H | NH-cyclopropyl |
| amino acid | acyl | $CH_3$ | H | NH-methyl |
| amino acid | acyl | $CH_3$ | H | NH-ethyl |
| amino acid | acyl | $CH_3$ | H | NH-acetyl |
| amino acid | acyl | $CH_3$ | H | OH |
| amino acid | acyl | $CH_3$ | H | OMe |
| amino acid | acyl | $CH_3$ | H | OEt |
| amino acid | acyl | $CH_3$ | H | O-cyclopropyl |
| amino acid | acyl | $CH_3$ | H | O-acetyl |
| amino acid | acyl | $CH_3$ | H | SH |
| amino acid | acyl | $CH_3$ | H | SMe |
| amino acid | acyl | $CH_3$ | H | SEt |
| amino acid | acyl | $CH_3$ | H | S-cyclopropyl |
| amino acid | acyl | $CH_3$ | H | F |
| amino acid | acyl | $CH_3$ | H | Cl |
| amino acid | acyl | $CH_3$ | H | Br |
| amino acid | acyl | $CH_3$ | H | I |
| acyl | H | $CF_3$ | H | H |
| acyl | H | $CF_3$ | H | $NH_2$ |
| acyl | H | $CF_3$ | H | NH-cyclopropyl |
| acyl | H | $CF_3$ | H | NH-methyl |
| acyl | H | $CF_3$ | H | NH-ethyl |
| acyl | H | $CF_3$ | H | NH-acetyl |
| acyl | H | $CF_3$ | H | OH |
| acyl | H | $CF_3$ | H | OMe |
| acyl | H | $CF_3$ | H | OEt |
| acyl | H | $CF_3$ | H | O-cyclopropyl |
| acyl | H | $CF_3$ | H | O-acetyl |
| acyl | H | $CF_3$ | H | SH |
| acyl | H | $CF_3$ | H | SMe |
| acyl | H | $CF_3$ | H | SEt |
| acyl | H | $CF_3$ | H | S-cyclopropyl |
| acyl | H | $CF_3$ | H | F |
| acyl | H | $CF_3$ | H | Cl |
| acyl | H | $CF_3$ | H | Br |
| acyl | H | $CF_3$ | H | I |
| acyl | acyl | $CF_3$ | H | H |
| acyl | acyl | $CF_3$ | H | $NH_2$ |
| acyl | acyl | $CF_3$ | H | NH-cyclopropyl |
| acyl | acyl | $CF_3$ | H | NH-methyl |
| acyl | acyl | $CF_3$ | H | NH-ethyl |
| acyl | acyl | $CF_3$ | H | NH-acetyl |
| acyl | acyl | $CF_3$ | H | OH |
| acyl | acyl | $CF_3$ | H | OMe |
| acyl | acyl | $CF_3$ | H | OEt |
| acyl | acyl | $CF_3$ | H | O-cyclopropyl |
| acyl | acyl | $CF_3$ | H | O-acetyl |
| acyl | acyl | $CF_3$ | H | SH |
| acyl | acyl | $CF_3$ | H | SMe |
| acyl | acyl | $CF_3$ | H | SEt |
| acyl | acyl | $CF_3$ | H | S-cyclopropyl |
| acyl | acyl | $CF_3$ | H | F |
| acyl | acyl | $CF_3$ | H | Cl |
| acyl | acyl | $CF_3$ | H | Br |
| acyl | acyl | $CF_3$ | H | I |
| acyl | amino acid | $CF_3$ | H | H |
| acyl | amino acid | $CF_3$ | H | $NH_2$ |
| acyl | amino acid | $CF_3$ | H | NH-cyclopropyl |
| acyl | amino acid | $CF_3$ | H | NH-methyl |
| acyl | amino acid | $CF_3$ | H | NH-ethyl |
| acyl | amino acid | $CF_3$ | H | NH-acetyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | $CF_3$ | H | OH |
| acyl | amino acid | $CF_3$ | H | OMe |
| acyl | amino acid | $CF_3$ | H | OEt |
| acyl | amino acid | $CF_3$ | H | O-cyclopropyl |
| acyl | amino acid | $CF_3$ | H | O-acetyl |
| acyl | amino acid | $CF_3$ | H | SH |
| acyl | amino acid | $CF_3$ | H | SMe |
| acyl | amino acid | $CF_3$ | H | SEt |
| acyl | amino acid | $CF_3$ | H | S-cyclopropyl |
| acyl | amino acid | $CF_3$ | H | F |
| acyl | amino acid | $CF_3$ | H | Cl |
| acyl | amino acid | $CF_3$ | H | Br |
| acyl | amino acid | $CF_3$ | H | I |
| H | acyl | $CF_3$ | H | H |
| H | acyl | $CF_3$ | H | $NH_2$ |
| H | acyl | $CF_3$ | H | NH-cyclopropyl |
| H | acyl | $CF_3$ | H | NH-methyl |
| H | acyl | $CF_3$ | H | NH-ethyl |
| H | acyl | $CF_3$ | H | NH-acetyl |
| H | acyl | $CF_3$ | H | OH |
| H | acyl | $CF_3$ | H | OMe |
| H | acyl | $CF_3$ | H | OEt |
| H | acyl | $CF_3$ | H | O-cyclopropyl |
| H | acyl | $CF_3$ | H | O-acetyl |
| H | acyl | $CF_3$ | H | SH |
| H | acyl | $CF_3$ | H | SMe |
| H | acyl | $CF_3$ | H | SEt |
| H | acyl | $CF_3$ | H | S-cyclopropyl |
| H | acyl | $CF_3$ | H | F |
| H | acyl | $CF_3$ | H | Cl |
| H | acyl | $CF_3$ | H | Br |
| H | acyl | $CF_3$ | H | I |
| H | amino acid | $CF_3$ | H | H |
| H | amino acid | $CF_3$ | H | $NH_2$ |
| H | amino acid | $CF_3$ | H | NH-cyclopropyl |
| H | amino acid | $CF_3$ | H | NH-methyl |
| H | amino acid | $CF_3$ | H | NH-ethyl |
| H | amino acid | $CF_3$ | H | NH-acetyl |
| H | amino acid | $CF_3$ | H | OH |
| H | amino acid | $CF_3$ | H | OMe |
| H | amino acid | $CF_3$ | H | OEt |
| H | amino acid | $CF_3$ | H | O-cyclopropyl |
| H | amino acid | $CF_3$ | H | O-acetyl |
| H | amino acid | $CF_3$ | H | SH |
| H | amino acid | $CF_3$ | H | SMe |
| H | amino acid | $CF_3$ | H | SEt |
| H | amino acid | $CF_3$ | H | S-cyclopropyl |
| H | amino acid | $CF_3$ | H | F |
| H | amino acid | $CF_3$ | H | Cl |
| H | amino acid | $CF_3$ | H | Br |
| H | amino acid | $CF_3$ | H | I |
| amino acid | amino acid | $CF_3$ | H | H |
| amino acid | amino acid | $CF_3$ | H | $NH_2$ |
| amino acid | amino acid | $CF_3$ | H | NH-cyclopropyl |
| amino acid | amino acid | $CF_3$ | H | NH-methyl |
| amino acid | amino acid | $CF_3$ | H | NH-ethyl |
| amino acid | amino acid | $CF_3$ | H | NH-acetyl |
| amino acid | amino acid | $CF_3$ | H | OH |
| amino acid | amino acid | $CF_3$ | H | OMe |
| amino acid | amino acid | $CF_3$ | H | OEt |
| amino acid | amino acid | $CF_3$ | H | O-cyclopropyl |
| amino acid | amino acid | $CF_3$ | H | O-acetyl |
| amino acid | amino acid | $CF_3$ | H | SH |
| amino acid | amino acid | $CF_3$ | H | SMe |
| amino acid | amino acid | $CF_3$ | H | SEt |
| amino acid | amino acid | $CF_3$ | H | S-cyclopropyl |
| amino acid | amino acid | $CF_3$ | H | F |
| amino acid | amino acid | $CF_3$ | H | Cl |
| amino acid | amino acid | $CF_3$ | H | Br |
| amino acid | amino acid | $CF_3$ | H | I |
| amino acid | H | $CF_3$ | H | H |
| amino acid | H | $CF_3$ | H | $NH_2$ |
| amino acid | H | $CF_3$ | H | NH-cyclopropyl |
| amino acid | H | $CF_3$ | H | NH-methyl |
| amino acid | H | $CF_3$ | H | NH-ethyl |
| amino acid | H | $CF_3$ | H | NH-acetyl |
| amino acid | H | $CF_3$ | H | OH |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | $CF_3$ | H | OMe |
| amino acid | H | $CF_3$ | H | OEt |
| amino acid | H | $CF_3$ | H | O-cyclopropyl |
| amino acid | H | $CF_3$ | H | O-acetyl |
| amino acid | H | $CF_3$ | H | SH |
| amino acid | H | $CF_3$ | H | SMe |
| amino acid | H | $CF_3$ | H | SEt |
| amino acid | H | $CF_3$ | H | S-cyclopropyl |
| amino acid | H | $CF_3$ | H | F |
| amino acid | H | $CF_3$ | H | Cl |
| amino acid | H | $CF_3$ | H | Br |
| amino acid | H | $CF_3$ | H | I |
| amino acid | acyl | $CF_3$ | H | H |
| amino acid | acyl | $CF_3$ | H | $NH_2$ |
| amino acid | acyl | $CF_3$ | H | NH-cyclopropyl |
| amino acid | acyl | $CF_3$ | H | NH-methyl |
| amino acid | acyl | $CF_3$ | H | NH-ethyl |
| amino acid | acyl | $CF_3$ | H | NH-acetyl |
| amino acid | acyl | $CF_3$ | H | OH |
| amino acid | acyl | $CF_3$ | H | OMe |
| amino acid | acyl | $CF_3$ | H | OEt |
| amino acid | acyl | $CF_3$ | H | O-cyclopropyl |
| amino acid | acyl | $CF_3$ | H | O-acetyl |
| amino acid | acyl | $CF_3$ | H | SH |
| amino acid | acyl | $CF_3$ | H | SMe |
| amino acid | acyl | $CF_3$ | H | SEt |
| amino acid | acyl | $CF_3$ | H | S-cyclopropyl |
| amino acid | acyl | $CF_3$ | H | F |
| amino acid | acyl | $CF_3$ | H | Cl |
| amino acid | acyl | $CF_3$ | H | Br |
| amino acid | acyl | $CF_3$ | H | I |
| acyl | H | Br | H | H |
| acyl | H | Br | H | $NH_2$ |
| acyl | H | Br | H | NH-cyclopropyl |
| acyl | H | Br | H | NH-methyl |
| acyl | H | Br | H | NH-ethyl |
| acyl | H | Br | H | NH-acetyl |
| acyl | H | Br | H | OH |
| acyl | H | Br | H | OMe |
| acyl | H | Br | H | OEt |
| acyl | H | Br | H | O-cyclopropyl |
| acyl | H | Br | H | O-acetyl |
| acyl | H | Br | H | SH |
| acyl | H | Br | H | SMe |
| acyl | H | Br | H | SEt |
| acyl | H | Br | H | S-cyclopropyl |
| acyl | H | Br | H | F |
| acyl | H | Br | H | Cl |
| acyl | H | Br | H | Br |
| acyl | H | Br | H | I |
| acyl | acyl | Br | H | H |
| acyl | acyl | Br | H | $NH_2$ |
| acyl | acyl | Br | H | NH-cyclopropyl |
| acyl | acyl | Br | H | NH-methyl |
| acyl | acyl | Br | H | NH-ethyl |
| acyl | acyl | Br | H | NH-acetyl |
| acyl | acyl | Br | H | OH |
| acyl | acyl | Br | H | OMe |
| acyl | acyl | Br | H | OEt |
| acyl | acyl | Br | H | O-cyclopropyl |
| acyl | acyl | Br | H | O-acetyl |
| acyl | acyl | Br | H | SH |
| acyl | acyl | Br | H | SMe |
| acyl | acyl | Br | H | SEt |
| acyl | acyl | Br | H | S-cyclopropyl |
| acyl | acyl | Br | H | F |
| acyl | acyl | Br | H | Cl |
| acyl | acyl | Br | H | Br |
| acyl | acyl | Br | H | I |
| acyl | amino acid | Br | H | H |
| acyl | amino acid | Br | H | $NH_2$ |
| acyl | amino acid | Br | H | NH-cyclopropyl |
| acyl | amino acid | Br | H | NH-methyl |
| acyl | amino acid | Br | H | NH-ethyl |
| acyl | amino acid | Br | H | NH-acetyl |
| acyl | amino acid | Br | H | OH |
| acyl | amino acid | Br | H | OMe |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | Br | H | OEt |
| acyl | amino acid | Br | H | O-cyclopropyl |
| acyl | amino acid | Br | H | O-acetyl |
| acyl | amino acid | Br | H | SH |
| acyl | amino acid | Br | H | SMe |
| acyl | amino acid | Br | H | SEt |
| acyl | amino acid | Br | H | S-cyclopropyl |
| acyl | amino acid | Br | H | F |
| acyl | amino acid | Br | H | Cl |
| acyl | amino acid | Br | H | Br |
| acyl | amino acid | Br | H | I |
| H | acyl | Br | H | H |
| H | acyl | Br | H | $NH_2$ |
| H | acyl | Br | H | NH-cyclopropyl |
| H | acyl | Br | H | NH-methyl |
| H | acyl | Br | H | NH-ethyl |
| H | acyl | Br | H | NH-acetyl |
| H | acyl | Br | H | OH |
| H | acyl | Br | H | OMe |
| H | acyl | Br | H | OEt |
| H | acyl | Br | H | O-cyclopropyl |
| H | acyl | Br | H | O-acetyl |
| H | acyl | Br | H | SH |
| H | acyl | Br | H | SMe |
| H | acyl | Br | H | SEt |
| H | acyl | Br | H | S-cyclopropyl |
| H | acyl | Br | H | F |
| H | acyl | Br | H | Cl |
| H | acyl | Br | H | Br |
| H | acyl | Br | H | I |
| H | amino acid | Br | H | H |
| H | amino acid | Br | H | $NH_2$ |
| H | amino acid | Br | H | NH-cyclopropyl |
| H | amino acid | Br | H | NH-methyl |
| H | amino acid | Br | H | NH-ethyl |
| H | amino acid | Br | H | NH-acetyl |
| H | amino acid | Br | H | OH |
| H | amino acid | Br | H | OMe |
| H | amino acid | Br | H | OEt |
| H | amino acid | Br | H | O-cyclopropyl |
| H | amino acid | Br | H | O-acetyl |
| H | amino acid | Br | H | SH |
| H | amino acid | Br | H | SMe |
| H | amino acid | Br | H | SEt |
| H | amino acid | Br | H | S-cyclopropyl |
| H | amino acid | Br | H | F |
| H | amino acid | Br | H | Cl |
| H | amino acid | Br | H | Br |
| H | amino acid | Br | H | I |
| amino acid | amino acid | Br | H | H |
| amino acid | amino acid | Br | H | $NH_2$ |
| amino acid | amino acid | Br | H | NH-cyclopropyl |
| amino acid | amino acid | Br | H | NH-methyl |
| amino acid | amino acid | Br | H | NH-ethyl |
| amino acid | amino acid | Br | H | NH-acetyl |
| amino acid | amino acid | Br | H | OH |
| amino acid | amino acid | Br | H | OMe |
| amino acid | amino acid | Br | H | OEt |
| amino acid | amino acid | Br | H | O-cyclopropyl |
| amino acid | amino acid | Br | H | O-acetyl |
| amino acid | amino acid | Br | H | SH |
| amino acid | amino acid | Br | H | SMe |
| amino acid | amino acid | Br | H | SEt |
| amino acid | amino acid | Br | H | S-cyclopropyl |
| amino acid | amino acid | Br | H | F |
| amino acid | amino acid | Br | H | Cl |
| amino acid | amino acid | Br | H | Br |
| amino acid | amino acid | Br | H | I |
| amino acid | H | Br | H | H |
| amino acid | H | Br | H | $NH_2$ |
| amino acid | H | Br | H | NH-cyclopropyl |
| amino acid | H | Br | H | NH-methyl |
| amino acid | H | Br | H | NH-ethyl |
| amino acid | H | Br | H | NH-acetyl |
| amino acid | H | Br | H | OH |
| amino acid | H | Br | H | OMe |
| amino acid | H | Br | H | OEt |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | Br | H | O-cyclopropyl |
| amino acid | H | Br | H | O-acetyl |
| amino acid | H | Br | H | SH |
| amino acid | H | Br | H | SMe |
| amino acid | H | Br | H | SEt |
| amino acid | H | Br | H | S-cyclopropyl |
| amino acid | H | Br | H | F |
| amino acid | H | Br | H | Cl |
| amino acid | H | Br | H | Br |
| amino acid | H | Br | H | I |
| amino acid | acyl | Br | H | H |
| amino acid | acyl | Br | H | $NH_2$ |
| amino acid | acyl | Br | H | NH-cyclopropyl |
| amino acid | acyl | Br | H | NH-methyl |
| amino acid | acyl | Br | H | NH-ethyl |
| amino acid | acyl | Br | H | NH-acetyl |
| amino acid | acyl | Br | H | OH |
| amino acid | acyl | Br | H | OMe |
| amino acid | acyl | Br | H | OEt |
| amino acid | acyl | Br | H | O-cyclopropyl |
| amino acid | acyl | Br | H | O-acetyl |
| amino acid | acyl | Br | H | SH |
| amino acid | acyl | Br | H | SMe |
| amino acid | acyl | Br | H | SEt |
| amino acid | acyl | Br | H | S-cyclopropyl |
| amino acid | acyl | Br | H | F |
| amino acid | acyl | Br | H | Cl |
| amino acid | acyl | Br | H | Br |
| amino acid | acyl | Br | H | I |
| acyl | H | Cl | H | H |
| acyl | H | Cl | H | $NH_2$ |
| acyl | H | Cl | H | NH-cyclopropyl |
| acyl | H | Cl | H | NH-methyl |
| acyl | H | Cl | H | NH-ethyl |
| acyl | H | Cl | H | NH-acetyl |
| acyl | H | Cl | H | OH |
| acyl | H | Cl | H | OMe |
| acyl | H | Cl | H | OEt |
| acyl | H | Cl | H | O-cyclopropyl |
| acyl | H | Cl | H | O-acetyl |
| acyl | H | Cl | H | SH |
| acyl | H | Cl | H | SMe |
| acyl | H | Cl | H | SEt |
| acyl | H | Cl | H | S-cyclopropyl |
| acyl | H | Cl | H | F |
| acyl | H | Cl | H | Cl |
| acyl | H | Cl | H | Br |
| acyl | H | Cl | H | I |
| acyl | acyl | Cl | H | H |
| acyl | acyl | Cl | H | $NH_2$ |
| acyl | acyl | Cl | H | NH-cyclopropyl |
| acyl | acyl | Cl | H | NH-methyl |
| acyl | acyl | Cl | H | NH-ethyl |
| acyl | acyl | Cl | H | NH-acetyl |
| acyl | acyl | Cl | H | OH |
| acyl | acyl | Cl | H | OMe |
| acyl | acyl | Cl | H | OEt |
| acyl | acyl | Cl | H | O-cyclopropyl |
| acyl | acyl | Cl | H | O-acetyl |
| acyl | acyl | Cl | H | SH |
| acyl | acyl | Cl | H | SMe |
| acyl | acyl | Cl | H | SEt |
| acyl | acyl | Cl | H | S-cyclopropyl |
| acyl | acyl | Cl | H | F |
| acyl | acyl | Cl | H | Cl |
| acyl | acyl | Cl | H | Br |
| acyl | acyl | Cl | H | I |
| acyl | amino acid | Cl | H | H |
| acyl | amino acid | Cl | H | $NH_2$ |
| acyl | amino acid | Cl | H | NH-cyclopropyl |
| acyl | amino acid | Cl | H | NH-methyl |
| acyl | amino acid | Cl | H | NH-ethyl |
| acyl | amino acid | Cl | H | NH-acetyl |
| acyl | amino acid | Cl | H | OH |
| acyl | amino acid | Cl | H | OMe |
| acyl | amino acid | Cl | H | OEt |
| acyl | amino acid | Cl | H | O-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | Cl | H | O-acetyl |
| acyl | amino acid | Cl | H | SH |
| acyl | amino acid | Cl | H | SMe |
| acyl | amino acid | Cl | H | SEt |
| acyl | amino acid | Cl | H | S-cyclopropyl |
| acyl | amino acid | Cl | H | F |
| acyl | amino acid | Cl | H | Cl |
| acyl | amino acid | Cl | H | Br |
| acyl | amino acid | Cl | H | I |
| H | acyl | Cl | H | H |
| H | acyl | Cl | H | $NH_2$ |
| H | acyl | Cl | H | NH-cyclopropyl |
| H | acyl | Cl | H | NH-methyl |
| H | acyl | Cl | H | NH-ethyl |
| H | acyl | Cl | H | NH-acetyl |
| H | acyl | Cl | H | OH |
| H | acyl | Cl | H | OMe |
| H | acyl | Cl | H | OEt |
| H | acyl | Cl | H | O-cyclopropyl |
| H | acyl | Cl | H | O-acetyl |
| H | acyl | Cl | H | SH |
| H | acyl | Cl | H | SMe |
| H | acyl | Cl | H | SEt |
| H | acyl | Cl | H | S-cyclopropyl |
| H | acyl | Cl | H | F |
| H | acyl | Cl | H | Cl |
| H | acyl | Cl | H | Br |
| H | acyl | Cl | H | I |
| H | amino acid | Cl | H | H |
| H | amino acid | Cl | H | $NH_2$ |
| H | amino acid | Cl | H | NH-cyclopropyl |
| H | amino acid | Cl | H | NH-methyl |
| H | amino acid | Cl | H | NH-ethyl |
| H | amino acid | Cl | H | NH-acetyl |
| H | amino acid | Cl | H | OH |
| H | amino acid | Cl | H | OMe |
| H | amino acid | Cl | H | OEt |
| H | amino acid | Cl | H | O-cyclopropyl |
| H | amino acid | Cl | H | O-acetyl |
| H | amino acid | Cl | H | SH |
| H | amino acid | Cl | H | SMe |
| H | amino acid | Cl | H | SEt |
| H | amino acid | Cl | H | S-cyclopropyl |
| H | amino acid | Cl | H | F |
| H | amino acid | Cl | H | Cl |
| H | amino acid | Cl | H | Br |
| H | amino acid | Cl | H | I |
| amino acid | amino acid | Cl | H | H |
| amino acid | amino acid | Cl | H | $NH_2$ |
| amino acid | amino acid | Cl | H | NH-cyclopropyl |
| amino acid | amino acid | Cl | H | NH-methyl |
| amino acid | amino acid | Cl | H | NH-ethyl |
| amino acid | amino acid | Cl | H | NH-acetyl |
| amino acid | amino acid | Cl | H | OH |
| amino acid | amino acid | Cl | H | OMe |
| amino acid | amino acid | Cl | H | OEt |
| amino acid | amino acid | Cl | H | O-cyclopropyl |
| amino acid | amino acid | Cl | H | O-acetyl |
| amino acid | amino acid | Cl | H | SH |
| amino acid | amino acid | Cl | H | SMe |
| amino acid | amino acid | Cl | H | SEt |
| amino acid | amino acid | Cl | H | S-cyclopropyl |
| amino acid | amino acid | Cl | H | F |
| amino acid | amino acid | Cl | H | Cl |
| amino acid | amino acid | Cl | H | Br |
| amino acid | amino acid | Cl | H | I |
| amino acid | H | Cl | H | H |
| amino acid | H | Cl | H | $NH_2$ |
| amino acid | H | Cl | H | NH-cyclopropyl |
| amino acid | H | Cl | H | NH-methyl |
| amino acid | H | Cl | H | NH-ethyl |
| amino acid | H | Cl | H | NH-acetyl |
| amino acid | H | Cl | H | OH |
| amino acid | H | Cl | H | OMe |
| amino acid | H | Cl | H | OEt |
| amino acid | H | Cl | H | O-cyclopropyl |
| amino acid | H | Cl | H | O-acetyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | Cl | H | SH |
| amino acid | H | Cl | H | SMe |
| amino acid | H | Cl | H | SEt |
| amino acid | H | Cl | H | S-cyclopropyl |
| amino acid | H | Cl | H | F |
| amino acid | H | Cl | H | Cl |
| amino acid | H | Cl | H | Br |
| amino acid | H | Cl | H | I |
| amino acid | acyl | Cl | H | H |
| amino acid | acyl | Cl | H | $NH_2$ |
| amino acid | acyl | Cl | H | NH-cyclopropyl |
| amino acid | acyl | Cl | H | NH-methyl |
| amino acid | acyl | Cl | H | NH-ethyl |
| amino acid | acyl | Cl | H | NH-acetyl |
| amino acid | acyl | Cl | H | OH |
| amino acid | acyl | Cl | H | OMe |
| amino acid | acyl | Cl | H | OEt |
| amino acid | acyl | Cl | H | O-cyclopropyl |
| amino acid | acyl | Cl | H | O-acetyl |
| amino acid | acyl | Cl | H | SH |
| amino acid | acyl | Cl | H | SMe |
| amino acid | acyl | Cl | H | SEt |
| amino acid | acyl | Cl | H | S-cyclopropyl |
| amino acid | acyl | Cl | H | F |
| amino acid | acyl | Cl | H | Cl |
| amino acid | acyl | Cl | H | Br |
| amino acid | acyl | Cl | H | I |
| acyl | H | F | H | H |
| acyl | H | F | H | $NH_2$ |
| acyl | H | F | H | NH-cyclopropyl |
| acyl | H | F | H | NH-methyl |
| acyl | H | F | H | NH-ethyl |
| acyl | H | F | H | NH-acetyl |
| acyl | H | F | H | OH |
| acyl | H | F | H | OMe |
| acyl | H | F | H | OEt |
| acyl | H | F | H | O-cyclopropyl |
| acyl | H | F | H | O-acetyl |
| acyl | H | F | H | SH |
| acyl | H | F | H | SMe |
| acyl | H | F | H | SEt |
| acyl | H | F | H | S-cyclopropyl |
| acyl | H | F | H | F |
| acyl | H | F | H | Cl |
| acyl | H | F | H | Br |
| acyl | H | F | H | I |
| acyl | acyl | F | H | H |
| acyl | acyl | F | H | $NH_2$ |
| acyl | acyl | F | H | NH-cyclopropyl |
| acyl | acyl | F | H | NH-methyl |
| acyl | acyl | F | H | NH-ethyl |
| acyl | acyl | F | H | NH-acetyl |
| acyl | acyl | F | H | OH |
| acyl | acyl | F | H | OMe |
| acyl | acyl | F | H | OEt |
| acyl | acyl | F | H | O-cyclopropyl |
| acyl | acyl | F | H | O-acetyl |
| acyl | acyl | F | H | SH |
| acyl | acyl | F | H | SMe |
| acyl | acyl | F | H | SEt |
| acyl | acyl | F | H | S-cyclopropyl |
| acyl | acyl | F | H | F |
| acyl | acyl | F | H | Cl |
| acyl | acyl | F | H | Br |
| acyl | acyl | F | H | I |
| acyl | amino acid | F | H | H |
| acyl | amino acid | F | H | $NH_2$ |
| acyl | amino acid | F | H | NH-cyclopropyl |
| acyl | amino acid | F | H | NH-methyl |
| acyl | amino acid | F | H | NH-ethyl |
| acyl | amino acid | F | H | NH-acetyl |
| acyl | amino acid | F | H | OH |
| acyl | amino acid | F | H | OMe |
| acyl | amino acid | F | H | OEt |
| acyl | amino acid | F | H | O-cyclopropyl |
| acyl | amino acid | F | H | O-acetyl |
| acyl | amino acid | F | H | SH |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | F | H | SMe |
| acyl | amino acid | F | H | SEt |
| acyl | amino acid | F | H | S-cyclopropyl |
| acyl | amino acid | F | H | F |
| acyl | amino acid | F | H | Cl |
| acyl | amino acid | F | H | Br |
| acyl | amino acid | F | H | I |
| H | acyl | F | H | H |
| H | acyl | F | H | $NH_2$ |
| H | acyl | F | H | NH-cyclopropyl |
| H | acyl | F | H | NH-methyl |
| H | acyl | F | H | NH-ethyl |
| H | acyl | F | H | NH-acetyl |
| H | acyl | F | H | OH |
| H | acyl | F | H | OMe |
| H | acyl | F | H | OEt |
| H | acyl | F | H | O-cyclopropyl |
| H | acyl | F | H | O-acetyl |
| H | acyl | F | H | SH |
| H | acyl | F | H | SMe |
| H | acyl | F | H | SEt |
| H | acyl | F | H | S-cyclopropyl |
| H | acyl | F | H | F |
| H | acyl | F | H | Cl |
| H | acyl | F | H | Br |
| H | acyl | F | H | I |
| H | amino acid | F | H | H |
| H | amino acid | F | H | $NH_2$ |
| H | amino acid | F | H | NH-cyclopropyl |
| H | amino acid | F | H | NH-methyl |
| H | amino acid | F | H | NH-ethyl |
| H | amino acid | F | H | NH-acetyl |
| H | amino acid | F | H | OH |
| H | amino acid | F | H | OMe |
| H | amino acid | F | H | OEt |
| H | amino acid | F | H | O-cyclopropyl |
| H | amino acid | F | H | O-acetyl |
| H | amino acid | F | H | SH |
| H | amino acid | F | H | SMe |
| H | amino acid | F | H | SEt |
| H | amino acid | F | H | S-cyclopropyl |
| H | amino acid | F | H | F |
| H | amino acid | F | H | Cl |
| H | amino acid | F | H | Br |
| H | amino acid | F | H | I |
| amino acid | amino acid | F | H | H |
| amino acid | amino acid | F | H | $NH_2$ |
| amino acid | amino acid | F | H | NH-cyclopropyl |
| amino acid | amino acid | F | H | NH-methyl |
| amino acid | amino acid | F | H | NH-ethyl |
| amino acid | amino acid | F | H | NH-acetyl |
| amino acid | amino acid | F | H | OH |
| amino acid | amino acid | F | H | OMe |
| amino acid | amino acid | F | H | OEt |
| amino acid | amino acid | F | H | O-cyclopropyl |
| amino acid | amino acid | F | H | O-acetyl |
| amino acid | amino acid | F | H | SH |
| amino acid | amino acid | F | H | SMe |
| amino acid | amino acid | F | H | SEt |
| amino acid | amino acid | F | H | S-cyclopropyl |
| amino acid | amino acid | F | H | F |
| amino acid | amino acid | F | H | Cl |
| amino acid | amino acid | F | H | Br |
| amino acid | amino acid | F | H | I |
| amino acid | H | F | H | H |
| amino acid | H | F | H | $NH_2$ |
| amino acid | H | F | H | NH-cyclopropyl |
| amino acid | H | F | H | NH-methyl |
| amino acid | H | F | H | NH-ethyl |
| amino acid | H | F | H | NH-acetyl |
| amino acid | H | F | H | OH |
| amino acid | H | F | H | OMe |
| amino acid | H | F | H | OEt |
| amino acid | H | F | H | O-cyclopropyl |
| amino acid | H | F | H | O-acetyl |
| amino acid | H | F | H | SH |
| amino acid | H | F | H | SMe |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | F | H | SEt |
| amino acid | H | F | H | S-cyclopropyl |
| amino acid | H | F | H | F |
| amino acid | H | F | H | Cl |
| amino acid | H | F | H | Br |
| amino acid | H | F | H | I |
| amino acid | acyl | F | H | H |
| amino acid | acyl | F | H | $NH_2$ |
| amino acid | acyl | F | H | NH-cyclopropyl |
| amino acid | acyl | F | H | NH-methyl |
| amino acid | acyl | F | H | NH-ethyl |
| amino acid | acyl | F | H | NH-acetyl |
| amino acid | acyl | F | H | OH |
| amino acid | acyl | F | H | OMe |
| amino acid | acyl | F | H | OEt |
| amino acid | acyl | F | H | O-cyclopropyl |
| amino acid | acyl | F | H | O-acetyl |
| amino acid | acyl | F | H | SH |
| amino acid | acyl | F | H | SMe |
| amino acid | acyl | F | H | SEt |
| amino acid | acyl | F | H | S-cyclopropyl |
| amino acid | acyl | F | H | F |
| amino acid | acyl | F | H | Cl |
| amino acid | acyl | F | H | Br |
| amino acid | acyl | F | H | I |
| acyl | H | $NH_2$ | H | H |
| acyl | H | $NH_2$ | H | $NH_2$ |
| acyl | H | $NH_2$ | H | NH-cyclopropyl |
| acyl | H | $NH_2$ | H | NH-methyl |
| acyl | H | $NH_2$ | H | NH-ethyl |
| acyl | H | $NH_2$ | H | NH-acetyl |
| acyl | H | $NH_2$ | H | OH |
| acyl | H | $NH_2$ | H | OMe |
| acyl | H | $NH_2$ | H | OEt |
| acyl | H | $NH_2$ | H | O-cyclopropyl |
| acyl | H | $NH_2$ | H | O-acetyl |
| acyl | H | $NH_2$ | H | SH |
| acyl | H | $NH_2$ | H | SMe |
| acyl | H | $NH_2$ | H | SEt |
| acyl | H | $NH_2$ | H | S-cyclopropyl |
| acyl | H | $NH_2$ | H | F |
| acyl | H | $NH_2$ | H | Cl |
| acyl | H | $NH_2$ | H | Br |
| acyl | H | $NH_2$ | H | I |
| acyl | acyl | $NH_2$ | H | H |
| acyl | acyl | $NH_2$ | H | $NH_2$ |
| acyl | acyl | $NH_2$ | H | NH-cyclopropyl |
| acyl | acyl | $NH_2$ | H | NH-methyl |
| acyl | acyl | $NH_2$ | H | NH-ethyl |
| acyl | acyl | $NH_2$ | H | NH-acetyl |
| acyl | acyl | $NH_2$ | H | OH |
| acyl | acyl | $NH_2$ | H | OMe |
| acyl | acyl | $NH_2$ | H | OEt |
| acyl | acyl | $NH_2$ | H | O-cyclopropyl |
| acyl | acyl | $NH_2$ | H | O-acetyl |
| acyl | acyl | $NH_2$ | H | SH |
| acyl | acyl | $NH_2$ | H | SMe |
| acyl | acyl | $NH_2$ | H | SEt |
| acyl | acyl | $NH_2$ | H | S-cyclopropyl |
| acyl | acyl | $NH_2$ | H | F |
| acyl | acyl | $NH_2$ | H | Cl |
| acyl | acyl | $NH_2$ | H | Br |
| acyl | acyl | $NH_2$ | H | I |
| acyl | amino acid | $NH_2$ | H | H |
| acyl | amino acid | $NH_2$ | H | $NH_2$ |
| acyl | amino acid | $NH_2$ | H | NH-cyclopropyl |
| acyl | amino acid | $NH_2$ | H | NH-methyl |
| acyl | amino acid | $NH_2$ | H | NH-ethyl |
| acyl | amino acid | $NH_2$ | H | NH-acetyl |
| acyl | amino acid | $NH_2$ | H | OH |
| acyl | amino acid | $NH_2$ | H | OMe |
| acyl | amino acid | $NH_2$ | H | OEt |
| acyl | amino acid | $NH_2$ | H | O-cyclopropyl |
| acyl | amino acid | $NH_2$ | H | O-acetyl |
| acyl | amino acid | $NH_2$ | H | SH |
| acyl | amino acid | $NH_2$ | H | SMe |
| acyl | amino acid | $NH_2$ | H | SEt |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | $NH_2$ | H | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | H | F |
| acyl | amino acid | $NH_2$ | H | Cl |
| acyl | amino acid | $NH_2$ | H | Br |
| acyl | amino acid | $NH_2$ | H | I |
| H | acyl | $NH_2$ | H | H |
| H | acyl | $NH_2$ | H | $NH_2$ |
| H | acyl | $NH_2$ | H | NH-cyclopropyl |
| H | acyl | $NH_2$ | H | NH-methyl |
| H | acyl | $NH_2$ | H | NH-ethyl |
| H | acyl | $NH_2$ | H | NH-acetyl |
| H | acyl | $NH_2$ | H | OH |
| H | acyl | $NH_2$ | H | OMe |
| H | acyl | $NH_2$ | H | OEt |
| H | acyl | $NH_2$ | H | O-cyclopropyl |
| H | acyl | $NH_2$ | H | O-acetyl |
| H | acyl | $NH_2$ | H | SH |
| H | acyl | $NH_2$ | H | SMe |
| H | acyl | $NH_2$ | H | SEt |
| H | acyl | $NH_2$ | H | S-cyclopropyl |
| H | acyl | $NH_2$ | H | F |
| H | acyl | $NH_2$ | H | Cl |
| H | acyl | $NH_2$ | H | Br |
| H | acyl | $NH_2$ | H | I |
| H | amino acid | $NH_2$ | H | H |
| H | amino acid | $NH_2$ | H | $NH_2$ |
| H | amino acid | $NH_2$ | H | NH-cyclopropyl |
| H | amino acid | $NH_2$ | H | NH-methyl |
| H | amino acid | $NH_2$ | H | NH-ethyl |
| H | amino acid | $NH_2$ | H | NH-acetyl |
| H | amino acid | $NH_2$ | H | OH |
| H | amino acid | $NH_2$ | H | OMe |
| H | amino acid | $NH_2$ | H | OEt |
| H | amino acid | $NH_2$ | H | O-cyclopropyl |
| H | amino acid | $NH_2$ | H | O-acetyl |
| H | amino acid | $NH_2$ | H | SH |
| H | amino acid | $NH_2$ | H | SMe |
| H | amino acid | $NH_2$ | H | SEt |
| H | amino acid | $NH_2$ | H | S-cyclopropyl |
| H | amino acid | $NH_2$ | H | F |
| H | amino acid | $NH_2$ | H | Cl |
| H | amino acid | $NH_2$ | H | Br |
| H | amino acid | $NH_2$ | H | I |
| amino acid | amino acid | $NH_2$ | H | H |
| amino acid | amino acid | $NH_2$ | H | $NH_2$ |
| amino acid | amino acid | $NH_2$ | H | NH-cyclopropyl |
| amino acid | amino acid | $NH_2$ | H | NH-methyl |
| amino acid | amino acid | $NH_2$ | H | NH-ethyl |
| amino acid | amino acid | $NH_2$ | H | NH-acetyl |
| amino acid | amino acid | $NH_2$ | H | OH |
| amino acid | amino acid | $NH_2$ | H | OMe |
| amino acid | amino acid | $NH_2$ | H | OEt |
| amino acid | amino acid | $NH_2$ | H | O-cyclopropyl |
| amino acid | amino acid | $NH_2$ | H | O-acetyl |
| amino acid | amino acid | $NH_2$ | H | SH |
| amino acid | amino acid | $NH_2$ | H | SMe |
| amino acid | amino acid | $NH_2$ | H | SEt |
| amino acid | amino acid | $NH_2$ | H | S-cyclopropyl |
| amino acid | amino acid | $NH_2$ | H | F |
| amino acid | amino acid | $NH_2$ | H | Cl |
| amino acid | amino acid | $NH_2$ | H | Br |
| amino acid | amino acid | $NH_2$ | H | I |
| amino acid | H | $NH_2$ | H | H |
| amino acid | H | $NH_2$ | H | $NH_2$ |
| amino acid | H | $NH_2$ | H | NH-cyclopropyl |
| amino acid | H | $NH_2$ | H | NH-methyl |
| amino acid | H | $NH_2$ | H | NH-ethyl |
| amino acid | H | $NH_2$ | H | NH-acetyl |
| amino acid | H | $NH_2$ | H | OH |
| amino acid | H | $NH_2$ | H | OMe |
| amino acid | H | $NH_2$ | H | OEt |
| amino acid | H | $NH_2$ | H | O-cyclopropyl |
| amino acid | H | $NH_2$ | H | O-acetyl |
| amino acid | H | $NH_2$ | H | SH |
| amino acid | H | $NH_2$ | H | SMe |
| amino acid | H | $NH_2$ | H | SEt |
| amino acid | H | $NH_2$ | H | S-cyclopropyl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | $NH_2$ | H | F |
| amino acid | H | $NH_2$ | H | Cl |
| amino acid | H | $NH_2$ | H | Br |
| amino acid | H | $NH_2$ | H | I |
| amino acid | acyl | $NH_2$ | H | H |
| amino acid | acyl | $NH_2$ | H | $NH_2$ |
| amino acid | acyl | $NH_2$ | H | NH-cyclopropyl |
| amino acid | acyl | $NH_2$ | H | NH-methyl |
| amino acid | acyl | $NH_2$ | H | NH-ethyl |
| amino acid | acyl | $NH_2$ | H | NH-acetyl |
| amino acid | acyl | $NH_2$ | H | OH |
| amino acid | acyl | $NH_2$ | H | OMe |
| amino acid | acyl | $NH_2$ | H | OEt |
| amino acid | acyl | $NH_2$ | H | O-cyclopropyl |
| amino acid | acyl | $NH_2$ | H | O-acetyl |
| amino acid | acyl | $NH_2$ | H | SH |
| amino acid | acyl | $NH_2$ | H | SMe |
| amino acid | acyl | $NH_2$ | H | SEt |
| amino acid | acyl | $NH_2$ | H | S-cyclopropyl |
| amino acid | acyl | $NH_2$ | H | F |
| amino acid | acyl | $NH_2$ | H | Cl |
| amino acid | acyl | $NH_2$ | H | Br |
| amino acid | acyl | $NH_2$ | H | I |
| acyl | H | SH | H | H |
| acyl | H | SH | H | $NH_2$ |
| acyl | H | SH | H | NH-cyclopropyl |
| acyl | H | SH | H | NH-methyl |
| acyl | H | SH | H | NH-ethyl |
| acyl | H | SH | H | NH-acetyl |
| acyl | H | SH | H | OH |
| acyl | H | SH | H | OMe |
| acyl | H | SH | H | OEt |
| acyl | H | SH | H | O-cyclopropyl |
| acyl | H | SH | H | O-acetyl |
| acyl | H | SH | H | SH |
| acyl | H | SH | H | SMe |
| acyl | H | SH | H | SEt |
| acyl | H | SH | H | S-cyclopropyl |
| acyl | H | SH | H | F |
| acyl | H | SH | H | Cl |
| acyl | H | SH | H | Br |
| acyl | H | SH | H | I |
| acyl | acyl | SH | H | H |
| acyl | acyl | SH | H | $NH_2$ |
| acyl | acyl | SH | H | NH-cyclopropyl |
| acyl | acyl | SH | H | NH-methyl |
| acyl | acyl | SH | H | NH-ethyl |
| acyl | acyl | SH | H | NH-acetyl |
| acyl | acyl | SH | H | OH |
| acyl | acyl | SH | H | OMe |
| acyl | acyl | SH | H | OEt |
| acyl | acyl | SH | H | O-cyclopropyl |
| acyl | acyl | SH | H | O-acetyl |
| acyl | acyl | SH | H | SH |
| acyl | acyl | SH | H | SMe |
| acyl | acyl | SH | H | SEt |
| acyl | acyl | SH | H | S-cyclopropyl |
| acyl | acyl | SH | H | F |
| acyl | acyl | SH | H | Cl |
| acyl | acyl | SH | H | Br |
| acyl | acyl | SH | H | I |
| acyl | amino acid | SH | H | H |
| acyl | amino acid | SH | H | $NH_2$ |
| acyl | amino acid | SH | H | NH-cyclopropyl |
| acyl | amino acid | SH | H | NH-methyl |
| acyl | amino acid | SH | H | NH-ethyl |
| acyl | amino acid | SH | H | NH-acetyl |
| acyl | amino acid | SH | H | OH |
| acyl | amino acid | SH | H | OMe |
| acyl | amino acid | SH | H | OEt |
| acyl | amino acid | SH | H | O-cyclopropyl |
| acyl | amino acid | SH | H | O-acetyl |
| acyl | amino acid | SH | H | SH |
| acyl | amino acid | SH | H | SMe |
| acyl | amino acid | SH | H | SEt |
| acyl | amino acid | SH | H | S-cyclopropyl |
| acyl | amino acid | SH | H | F |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | SH | H | Cl |
| acyl | amino acid | SH | H | Br |
| acyl | amino acid | SH | H | I |
| H | acyl | SH | H | H |
| H | acyl | SH | H | $NH_2$ |
| H | acyl | SH | H | NH-cyclopropyl |
| H | acyl | SH | H | NH-methyl |
| H | acyl | SH | H | NH-ethyl |
| H | acyl | SH | H | NH-acetyl |
| H | acyl | SH | H | OH |
| H | acyl | SH | H | OMe |
| H | acyl | SH | H | OEt |
| H | acyl | SH | H | O-cyclopropyl |
| H | acyl | SH | H | O-acetyl |
| H | acyl | SH | H | SH |
| H | acyl | SH | H | SMe |
| H | acyl | SH | H | SEt |
| H | acyl | SH | H | S-cyclopropyl |
| H | acyl | SH | H | F |
| H | acyl | SH | H | Cl |
| H | acyl | SH | H | Br |
| H | acyl | SH | H | I |
| H | amino acid | SH | H | H |
| H | amino acid | SH | H | $NH_2$ |
| H | amino acid | SH | H | NH-cyclopropyl |
| H | amino acid | SH | H | NH-methyl |
| H | amino acid | SH | H | NH-ethyl |
| H | amino acid | SH | H | NH-acetyl |
| H | amino acid | SH | H | OH |
| H | amino acid | SH | H | OMe |
| H | amino acid | SH | H | OEt |
| H | amino acid | SH | H | O-cyclopropyl |
| H | amino acid | SH | H | O-acetyl |
| H | amino acid | SH | H | SH |
| H | amino acid | SH | H | SMe |
| H | amino acid | SH | H | SEt |
| H | amino acid | SH | H | S-cyclopropyl |
| H | amino acid | SH | H | F |
| H | amino acid | SH | H | Cl |
| H | amino acid | SH | H | Br |
| H | amino acid | SH | H | I |
| amino acid | amino acid | SH | H | H |
| amino acid | amino acid | SH | H | $NH_2$ |
| amino acid | amino acid | SH | H | NH-cyclopropyl |
| amino acid | amino acid | SH | H | NH-methyl |
| amino acid | amino acid | SH | H | NH-ethyl |
| amino acid | amino acid | SH | H | NH-acetyl |
| amino acid | amino acid | SH | H | OH |
| amino acid | amino acid | SH | H | OMe |
| amino acid | amino acid | SH | H | OEt |
| amino acid | amino acid | SH | H | O-cyclopropyl |
| amino acid | amino acid | SH | H | O-acetyl |
| amino acid | amino acid | SH | H | SH |
| amino acid | amino acid | SH | H | SMe |
| amino acid | amino acid | SH | H | SEt |
| amino acid | amino acid | SH | H | S-cyclopropyl |
| amino acid | amino acid | SH | H | F |
| amino acid | amino acid | SH | H | Cl |
| amino acid | amino acid | SH | H | Br |
| amino acid | amino acid | SH | H | I |
| amino acid | H | SH | H | H |
| amino acid | H | SH | H | $NH_2$ |
| amino acid | H | SH | H | NH-cyclopropyl |
| amino acid | H | SH | H | NH-methyl |
| amino acid | H | SH | H | NH-ethyl |
| amino acid | H | SH | H | NH-acetyl |
| amino acid | H | SH | H | OH |
| amino acid | H | SH | H | OMe |
| amino acid | H | SH | H | OEt |
| amino acid | H | SH | H | O-cyclopropyl |
| amino acid | H | SH | H | O-acetyl |
| amino acid | H | SH | H | SH |
| amino acid | H | SH | H | SMe |
| amino acid | H | SH | H | SEt |
| amino acid | H | SH | H | S-cyclopropyl |
| amino acid | H | SH | H | F |
| amino acid | H | SH | H | Cl |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | SH | H | Br |
| amino acid | H | SH | H | I |
| amino acid | acyl | SH | H | H |
| amino acid | acyl | SH | H | $NH_2$ |
| amino acid | acyl | SH | H | NH-cyclopropyl |
| amino acid | acyl | SH | H | NH-methyl |
| amino acid | acyl | SH | H | NH-ethyl |
| amino acid | acyl | SH | H | NH-acetyl |
| amino acid | acyl | SH | H | OH |
| amino acid | acyl | SH | H | OMe |
| amino acid | acyl | SH | H | OEt |
| amino acid | acyl | SH | H | O-cyclopropyl |
| amino acid | acyl | SH | H | O-acetyl |
| amino acid | acyl | SH | H | SH |
| amino acid | acyl | SH | H | SMe |
| amino acid | acyl | SH | H | SEt |
| amino acid | acyl | SH | H | S-cyclopropyl |
| amino acid | acyl | SH | H | F |
| amino acid | acyl | SH | H | Cl |
| amino acid | acyl | SH | H | Br |
| amino acid | acyl | SH | H | I |
| acyl | H | OH | H | H |
| acyl | H | OH | H | $NH_2$ |
| acyl | H | OH | H | NH-cyclopropyl |
| acyl | H | OH | H | NH-methyl |
| acyl | H | OH | H | NH-ethyl |
| acyl | H | OH | H | NH-acetyl |
| acyl | H | OH | H | OH |
| acyl | H | OH | H | OMe |
| acyl | H | OH | H | OEt |
| acyl | H | OH | H | O-cyclopropyl |
| acyl | H | OH | H | O-acetyl |
| acyl | H | OH | H | SH |
| acyl | H | OH | H | SMe |
| acyl | H | OH | H | SEt |
| acyl | H | OH | H | S-cyclopropyl |
| acyl | H | OH | H | F |
| acyl | H | OH | H | Cl |
| acyl | H | OH | H | Br |
| acyl | H | OH | H | I |
| acyl | acyl | OH | H | H |
| acyl | acyl | OH | H | $NH_2$ |
| acyl | acyl | OH | H | NH-cyclopropyl |
| acyl | acyl | OH | H | NH-methyl |
| acyl | acyl | OH | H | NH-ethyl |
| acyl | acyl | OH | H | NH-acetyl |
| acyl | acyl | OH | H | OH |
| acyl | acyl | OH | H | OMe |
| acyl | acyl | OH | H | OEt |
| acyl | acyl | OH | H | O-cyclopropyl |
| acyl | acyl | OH | H | O-acetyl |
| acyl | acyl | OH | H | SH |
| acyl | acyl | OH | H | SMe |
| acyl | acyl | OH | H | SEt |
| acyl | acyl | OH | H | S-cyclopropyl |
| acyl | acyl | OH | H | F |
| acyl | acyl | OH | H | Cl |
| acyl | acyl | OH | H | Br |
| acyl | acyl | OH | H | I |
| acyl | amino acid | OH | H | H |
| acyl | amino acid | OH | H | $NH_2$ |
| acyl | amino acid | OH | H | NH-cyclopropyl |
| acyl | amino acid | OH | H | NH-methyl |
| acyl | amino acid | OH | H | NH-ethyl |
| acyl | amino acid | OH | H | NH-acetyl |
| acyl | amino acid | OH | H | OH |
| acyl | amino acid | OH | H | OMe |
| acyl | amino acid | OH | H | OEt |
| acyl | amino acid | OH | H | O-cyclopropyl |
| acyl | amino acid | OH | H | O-acetyl |
| acyl | amino acid | OH | H | SH |
| acyl | amino acid | OH | H | SMe |
| acyl | amino acid | OH | H | SEt |
| acyl | amino acid | OH | H | S-cyclopropyl |
| acyl | amino acid | OH | H | F |
| acyl | amino acid | OH | H | Cl |
| acyl | amino acid | OH | H | Br |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | OH | H | I |
| H | acyl | OH | H | H |
| H | acyl | OH | H | $NH_2$ |
| H | acyl | OH | H | NH-cyclopropyl |
| H | acyl | OH | H | NH-methyl |
| H | acyl | OH | H | NH-ethyl |
| H | acyl | OH | H | NH-acetyl |
| H | acyl | OH | H | OH |
| H | acyl | OH | H | OMe |
| H | acyl | OH | H | OEt |
| H | acyl | OH | H | O-cyclopropyl |
| H | acyl | OH | H | O-acetyl |
| H | acyl | OH | H | SH |
| H | acyl | OH | H | SMe |
| H | acyl | OH | H | SEt |
| H | acyl | OH | H | S-cyclopropyl |
| H | acyl | OH | H | F |
| H | acyl | OH | H | Cl |
| H | acyl | OH | H | Br |
| H | acyl | OH | H | I |
| H | amino acid | OH | H | H |
| H | amino acid | OH | H | $NH_2$ |
| H | amino acid | OH | H | NH-cyclopropyl |
| H | amino acid | OH | H | NH-methyl |
| H | amino acid | OH | H | NH-ethyl |
| H | amino acid | OH | H | NH-acetyl |
| H | amino acid | OH | H | OH |
| H | amino acid | OH | H | OMe |
| H | amino acid | OH | H | OEt |
| H | amino acid | OH | H | O-cyclopropyl |
| H | amino acid | OH | H | O-acetyl |
| H | amino acid | OH | H | SH |
| H | amino acid | OH | H | SMe |
| H | amino acid | OH | H | SEt |
| H | amino acid | OH | H | S-cyclopropyl |
| H | amino acid | OH | H | F |
| H | amino acid | OH | H | Cl |
| H | amino acid | OH | H | Br |
| H | amino acid | OH | H | I |
| amino acid | amino acid | OH | H | H |
| amino acid | amino acid | OH | H | $NH_2$ |
| amino acid | amino acid | OH | H | NH-cyclopropyl |
| amino acid | amino acid | OH | H | NH-methyl |
| amino acid | amino acid | OH | H | NH-ethyl |
| amino acid | amino acid | OH | H | NH-acetyl |
| amino acid | amino acid | OH | H | OH |
| amino acid | amino acid | OH | H | OMe |
| amino acid | amino acid | OH | H | OEt |
| amino acid | amino acid | OH | H | O-cyclopropyl |
| amino acid | amino acid | OH | H | O-acetyl |
| amino acid | amino acid | OH | H | SH |
| amino acid | amino acid | OH | H | SMe |
| amino acid | amino acid | OH | H | SEt |
| amino acid | amino acid | OH | H | S-cyclopropyl |
| amino acid | amino acid | OH | H | F |
| amino acid | amino acid | OH | H | Cl |
| amino acid | amino acid | OH | H | Br |
| amino acid | amino acid | OH | H | I |
| amino acid | H | OH | H | H |
| amino acid | H | OH | H | $NH_2$ |
| amino acid | H | OH | H | NH-cyclopropyl |
| amino acid | H | OH | H | NH-methyl |
| amino acid | H | OH | H | NH-ethyl |
| amino acid | H | OH | H | NH-acetyl |
| amino acid | H | OH | H | OH |
| amino acid | H | OH | H | OMe |
| amino acid | H | OH | H | OEt |
| amino acid | H | OH | H | O-cyclopropyl |
| amino acid | H | OH | H | O-acetyl |
| amino acid | H | OH | H | SH |
| amino acid | H | OH | H | SMe |
| amino acid | H | OH | H | SEt |
| amino acid | H | OH | H | S-cyclopropyl |
| amino acid | H | OH | H | F |
| amino acid | H | OH | H | Cl |
| amino acid | H | OH | H | Br |
| amino acid | H | OH | H | I |

TABLE 19-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | OH | H | H |
| amino acid | acyl | OH | H | $NH_2$ |
| amino acid | acyl | OH | H | NH-cyclopropyl |
| amino acid | acyl | OH | H | NH-methyl |
| amino acid | acyl | OH | H | NH-ethyl |
| amino acid | acyl | OH | H | NH-acetyl |
| amino acid | acyl | OH | H | OH |
| amino acid | acyl | OH | H | OMe |
| amino acid | acyl | OH | H | OEt |
| amino acid | acyl | OH | H | O-cyclopropyl |
| amino acid | acyl | OH | H | O-acetyl |
| amino acid | acyl | OH | H | SH |
| amino acid | acyl | OH | H | SMe |
| amino acid | acyl | OH | H | SEt |
| amino acid | acyl | OH | H | S-cyclopropyl |
| amino acid | acyl | OH | H | F |
| amino acid | acyl | OH | H | Cl |
| amino acid | acyl | OH | H | Br |
| amino acid | acyl | OH | H | I |

TABLE 20

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | $CH_3$ | Br | H |
| acyl | H | $CH_3$ | Br | $NH_2$ |
| acyl | H | $CH_3$ | Br | NH-cyclopropyl |
| acyl | H | $CH_3$ | Br | NH-methyl |
| acyl | H | $CH_3$ | Br | NH-ethyl |
| acyl | H | $CH_3$ | Br | NH-acetyl |
| acyl | H | $CH_3$ | Br | OH |
| acyl | H | $CH_3$ | Br | OMe |
| acyl | H | $CH_3$ | Br | OEt |
| acyl | H | $CH_3$ | Br | O-cyclopropyl |
| acyl | H | $CH_3$ | Br | O-acetyl |
| acyl | H | $CH_3$ | Br | SH |
| acyl | H | $CH_3$ | Br | SMe |
| acyl | H | $CH_3$ | Br | SEt |
| acyl | H | $CH_3$ | Br | S-cyclopropyl |
| acyl | H | $CH_3$ | Br | F |
| acyl | H | $CH_3$ | Br | Cl |
| acyl | H | $CH_3$ | Br | Br |
| acyl | H | $CH_3$ | Br | I |
| acyl | acyl | $CH_3$ | Br | H |
| acyl | acyl | $CH_3$ | Br | $NH_2$ |
| acyl | acyl | $CH_3$ | Br | NH-cyclopropyl |
| acyl | acyl | $CH_3$ | Br | NH-methyl |
| acyl | acyl | $CH_3$ | Br | NH-ethyl |
| acyl | acyl | $CH_3$ | Br | NH-acetyl |
| acyl | acyl | $CH_3$ | Br | OH |
| acyl | acyl | $CH_3$ | Br | OMe |
| acyl | acyl | $CH_3$ | Br | OEt |
| acyl | acyl | $CH_3$ | Br | O-cyclopropyl |
| acyl | acyl | $CH_3$ | Br | O-acetyl |
| acyl | acyl | $CH_3$ | Br | SH |
| acyl | acyl | $CH_3$ | Br | SMe |
| acyl | acyl | $CH_3$ | Br | SEt |
| acyl | acyl | $CH_3$ | Br | S-cyclopropyl |
| acyl | acyl | $CH_3$ | Br | F |
| acyl | acyl | $CH_3$ | Br | Cl |
| acyl | acyl | $CH_3$ | Br | Br |
| acyl | acyl | $CH_3$ | Br | I |
| acyl | amino acid | $CH_3$ | Br | H |
| acyl | amino acid | $CH_3$ | Br | $NH_2$ |
| acyl | amino acid | $CH_3$ | Br | NH-cyclopropyl |
| acyl | amino acid | $CH_3$ | Br | NH-methyl |
| acyl | amino acid | $CH_3$ | Br | NH-ethyl |
| acyl | amino acid | $CH_3$ | Br | NH-acetyl |
| acyl | amino acid | $CH_3$ | Br | OH |
| acyl | amino acid | $CH_3$ | Br | OMe |
| acyl | amino acid | $CH_3$ | Br | OEt |
| acyl | amino acid | $CH_3$ | Br | O-cyclopropyl |
| acyl | amino acid | $CH_3$ | Br | O-acetyl |
| acyl | amino acid | $CH_3$ | Br | SH |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | $CH_3$ | Br | SMe |
| acyl | amino acid | $CH_3$ | Br | SEt |
| acyl | amino acid | $CH_3$ | Br | S-cyclopropyl |
| acyl | amino acid | $CH_3$ | Br | F |
| acyl | amino acid | $CH_3$ | Br | Cl |
| acyl | amino acid | $CH_3$ | Br | Br |
| acyl | amino acid | $CH_3$ | Br | I |
| H | acyl | $CH_3$ | Br | H |
| H | acyl | $CH_3$ | Br | $NH_2$ |
| H | acyl | $CH_3$ | Br | NH-cyclopropyl |
| H | acyl | $CH_3$ | Br | NH-methyl |
| H | acyl | $CH_3$ | Br | NH-ethyl |
| H | acyl | $CH_3$ | Br | NH-acetyl |
| H | acyl | $CH_3$ | Br | OH |
| H | acyl | $CH_3$ | Br | OMe |
| H | acyl | $CH_3$ | Br | OEt |
| H | acyl | $CH_3$ | Br | O-cyclopropyl |
| H | acyl | $CH_3$ | Br | O-acetyl |
| H | acyl | $CH_3$ | Br | SH |
| H | acyl | $CH_3$ | Br | SMe |
| H | acyl | $CH_3$ | Br | SEt |
| H | acyl | $CH_3$ | Br | S-cyclopropyl |
| H | acyl | $CH_3$ | Br | F |
| H | acyl | $CH_3$ | Br | Cl |
| H | acyl | $CH_3$ | Br | Br |
| H | acyl | $CH_3$ | Br | I |
| H | amino acid | $CH_3$ | Br | H |
| H | amino acid | $CH_3$ | Br | $NH_2$ |
| H | amino acid | $CH_3$ | Br | NH-cyclopropyl |
| H | amino acid | $CH_3$ | Br | NH-methyl |
| H | amino acid | $CH_3$ | Br | NH-ethyl |
| H | amino acid | $CH_3$ | Br | NH-acetyl |
| H | amino acid | $CH_3$ | Br | OH |
| H | amino acid | $CH_3$ | Br | OMe |
| H | amino acid | $CH_3$ | Br | OEt |
| H | amino acid | $CH_3$ | Br | O-cyclopropyl |
| H | amino acid | $CH_3$ | Br | O-acetyl |
| H | amino acid | $CH_3$ | Br | SH |
| H | amino acid | $CH_3$ | Br | SMe |
| H | amino acid | $CH_3$ | Br | SEt |
| H | amino acid | $CH_3$ | Br | S-cyclopropyl |
| H | amino acid | $CH_3$ | Br | F |
| H | amino acid | $CH_3$ | Br | Cl |
| H | amino acid | $CH_3$ | Br | Br |
| H | amino acid | $CH_3$ | Br | I |
| amino acid | amino acid | $CH_3$ | Br | H |
| amino acid | amino acid | $CH_3$ | Br | $NH_2$ |
| amino acid | amino acid | $CH_3$ | Br | NH-cyclopropyl |
| amino acid | amino acid | $CH_3$ | Br | NH-methyl |
| amino acid | amino acid | $CH_3$ | Br | NH-ethyl |
| amino acid | amino acid | $CH_3$ | Br | NH-acetyl |
| amino acid | amino acid | $CH_3$ | Br | OH |
| amino acid | amino acid | $CH_3$ | Br | OMe |
| amino acid | amino acid | $CH_3$ | Br | OEt |
| amino acid | amino acid | $CH_3$ | Br | O-cyclopropyl |
| amino acid | amino acid | $CH_3$ | Br | O-acetyl |
| amino acid | amino acid | $CH_3$ | Br | SH |
| amino acid | amino acid | $CH_3$ | Br | SMe |
| amino acid | amino acid | $CH_3$ | Br | SEt |
| amino acid | amino acid | $CH_3$ | Br | S-cyclopropyl |
| amino acid | amino acid | $CH_3$ | Br | F |
| amino acid | amino acid | $CH_3$ | Br | Cl |
| amino acid | amino acid | $CH_3$ | Br | Br |
| amino acid | amino acid | $CH_3$ | Br | I |
| amino acid | H | $CH_3$ | Br | H |
| amino acid | H | $CH_3$ | Br | $NH_2$ |
| amino acid | H | $CH_3$ | Br | NH-cyclopropyl |
| amino acid | H | $CH_3$ | Br | NH-methyl |
| amino acid | H | $CH_3$ | Br | NH-ethyl |
| amino acid | H | $CH_3$ | Br | NH-acetyl |
| amino acid | H | $CH_3$ | Br | OH |
| amino acid | H | $CH_3$ | Br | OMe |
| amino acid | H | $CH_3$ | Br | OEt |
| amino acid | H | $CH_3$ | Br | O-cyclopropyl |
| amino acid | H | $CH_3$ | Br | O-acetyl |
| amino acid | H | $CH_3$ | Br | SH |
| amino acid | H | $CH_3$ | Br | SMe |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | $CH_3$ | Br | SEt |
| amino acid | H | $CH_3$ | Br | S-cyclopropyl |
| amino acid | H | $CH_3$ | Br | F |
| amino acid | H | $CH_3$ | Br | Cl |
| amino acid | H | $CH_3$ | Br | Br |
| amino acid | H | $CH_3$ | Br | I |
| amino acid | acyl | $CH_3$ | Br | H |
| amino acid | acyl | $CH_3$ | Br | $NH_2$ |
| amino acid | acyl | $CH_3$ | Br | NH-cyclopropyl |
| amino acid | acyl | $CH_3$ | Br | NH-methyl |
| amino acid | acyl | $CH_3$ | Br | NH-ethyl |
| amino acid | acyl | $CH_3$ | Br | NH-acetyl |
| amino acid | acyl | $CH_3$ | Br | OH |
| amino acid | acyl | $CH_3$ | Br | OMe |
| amino acid | acyl | $CH_3$ | Br | OEt |
| amino acid | acyl | $CH_3$ | Br | O-cyclopropyl |
| amino acid | acyl | $CH_3$ | Br | O-acetyl |
| amino acid | acyl | $CH_3$ | Br | SH |
| amino acid | acyl | $CH_3$ | Br | SMe |
| amino acid | acyl | $CH_3$ | Br | SEt |
| amino acid | acyl | $CH_3$ | Br | S-cyclopropyl |
| amino acid | acyl | $CH_3$ | Br | F |
| amino acid | acyl | $CH_3$ | Br | Cl |
| amino acid | acyl | $CH_3$ | Br | Br |
| amino acid | acyl | $CH_3$ | Br | I |
| acyl | H | $CF_3$ | Br | H |
| acyl | H | $CF_3$ | Br | $NH_2$ |
| acyl | H | $CF_3$ | Br | NH-cyclopropyl |
| acyl | H | $CF_3$ | Br | NH-methyl |
| acyl | H | $CF_3$ | Br | NH-ethyl |
| acyl | H | $CF_3$ | Br | NH-acetyl |
| acyl | H | $CF_3$ | Br | OH |
| acyl | H | $CF_3$ | Br | OMe |
| acyl | H | $CF_3$ | Br | OEt |
| acyl | H | $CF_3$ | Br | O-cyclopropyl |
| acyl | H | $CF_3$ | Br | O-acetyl |
| acyl | H | $CF_3$ | Br | SH |
| acyl | H | $CF_3$ | Br | SMe |
| acyl | H | $CF_3$ | Br | SEt |
| acyl | H | $CF_3$ | Br | S-cyclopropyl |
| acyl | H | $CF_3$ | Br | F |
| acyl | H | $CF_3$ | Br | Cl |
| acyl | H | $CF_3$ | Br | Br |
| acyl | H | $CF_3$ | Br | I |
| acyl | acyl | $CF_3$ | Br | H |
| acyl | acyl | $CF_3$ | Br | $NH_2$ |
| acyl | acyl | $CF_3$ | Br | NH-cyclopropyl |
| acyl | acyl | $CF_3$ | Br | NH-methyl |
| acyl | acyl | $CF_3$ | Br | NH-ethyl |
| acyl | acyl | $CF_3$ | Br | NH-acetyl |
| acyl | acyl | $CF_3$ | Br | OH |
| acyl | acyl | $CF_3$ | Br | OMe |
| acyl | acyl | $CF_3$ | Br | OEt |
| acyl | acyl | $CF_3$ | Br | O-cyclopropyl |
| acyl | acyl | $CF_3$ | Br | O-acetyl |
| acyl | acyl | $CF_3$ | Br | SH |
| acyl | acyl | $CF_3$ | Br | SMe |
| acyl | acyl | $CF_3$ | Br | SEt |
| acyl | acyl | $CF_3$ | Br | S-cyclopropyl |
| acyl | acyl | $CF_3$ | Br | F |
| acyl | acyl | $CF_3$ | Br | Cl |
| acyl | acyl | $CF_3$ | Br | Br |
| acyl | acyl | $CF_3$ | Br | I |
| acyl | amino acid | $CF_3$ | Br | H |
| acyl | amino acid | $CF_3$ | Br | $NH_2$ |
| acyl | amino acid | $CF_3$ | Br | NH-cyclopropyl |
| acyl | amino acid | $CF_3$ | Br | NH-methyl |
| acyl | amino acid | $CF_3$ | Br | NH-ethyl |
| acyl | amino acid | $CF_3$ | Br | NH-acetyl |
| acyl | amino acid | $CF_3$ | Br | OH |
| acyl | amino acid | $CF_3$ | Br | OMe |
| acyl | amino acid | $CF_3$ | Br | OEt |
| acyl | amino acid | $CF_3$ | Br | O-cyclopropyl |
| acyl | amino acid | $CF_3$ | Br | O-acetyl |
| acyl | amino acid | $CF_3$ | Br | SH |
| acyl | amino acid | $CF_3$ | Br | SMe |
| acyl | amino acid | $CF_3$ | Br | SEt |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | $CF_3$ | Br | S-cyclopropyl |
| acyl | amino acid | $CF_3$ | Br | F |
| acyl | amino acid | $CF_3$ | Br | Cl |
| acyl | amino acid | $CF_3$ | Br | Br |
| acyl | amino acid | $CF_3$ | Br | I |
| H | acyl | $CF_3$ | Br | H |
| H | acyl | $CF_3$ | Br | $NH_2$ |
| H | acyl | $CF_3$ | Br | NH-cyclopropyl |
| H | acyl | $CF_3$ | Br | NH-methyl |
| H | acyl | $CF_3$ | Br | NH-ethyl |
| H | acyl | $CF_3$ | Br | NH-acetyl |
| H | acyl | $CF_3$ | Br | OH |
| H | acyl | $CF_3$ | Br | OMe |
| H | acyl | $CF_3$ | Br | OEt |
| H | acyl | $CF_3$ | Br | O-cyclopropyl |
| H | acyl | $CF_3$ | Br | O-acetyl |
| H | acyl | $CF_3$ | Br | SH |
| H | acyl | $CF_3$ | Br | SMe |
| H | acyl | $CF_3$ | Br | SEt |
| H | acyl | $CF_3$ | Br | S-cyclopropyl |
| H | acyl | $CF_3$ | Br | F |
| H | acyl | $CF_3$ | Br | Cl |
| H | acyl | $CF_3$ | Br | Br |
| H | acyl | $CF_3$ | Br | I |
| H | amino acid | $CF_3$ | Br | H |
| H | amino acid | $CF_3$ | Br | $NH_2$ |
| H | amino acid | $CF_3$ | Br | NH-cyclopropyl |
| H | amino acid | $CF_3$ | Br | NH-methyl |
| H | amino acid | $CF_3$ | Br | NH-ethyl |
| H | amino acid | $CF_3$ | Br | NH-acetyl |
| H | amino acid | $CF_3$ | Br | OH |
| H | amino acid | $CF_3$ | Br | OMe |
| H | amino acid | $CF_3$ | Br | OEt |
| H | amino acid | $CF_3$ | Br | O-cyclopropyl |
| H | amino acid | $CF_3$ | Br | O-acetyl |
| H | amino acid | $CF_3$ | Br | SH |
| H | amino acid | $CF_3$ | Br | SMe |
| H | amino acid | $CF_3$ | Br | SEt |
| H | amino acid | $CF_3$ | Br | S-cyclopropyl |
| H | amino acid | $CF_3$ | Br | F |
| H | amino acid | $CF_3$ | Br | Cl |
| H | amino acid | $CF_3$ | Br | Br |
| H | amino acid | $CF_3$ | Br | I |
| amino acid | amino acid | $CF_3$ | Br | H |
| amino acid | amino acid | $CF_3$ | Br | $NH_2$ |
| amino acid | amino acid | $CF_3$ | Br | NH-cyclopropyl |
| amino acid | amino acid | $CF_3$ | Br | NH-methyl |
| amino acid | amino acid | $CF_3$ | Br | NH-ethyl |
| amino acid | amino acid | $CF_3$ | Br | NH-acetyl |
| amino acid | amino acid | $CF_3$ | Br | OH |
| amino acid | amino acid | $CF_3$ | Br | OMe |
| amino acid | amino acid | $CF_3$ | Br | OEt |
| amino acid | amino acid | $CF_3$ | Br | O-cyclopropyl |
| amino acid | amino acid | $CF_3$ | Br | O-acetyl |
| amino acid | amino acid | $CF_3$ | Br | SH |
| amino acid | amino acid | $CF_3$ | Br | SMe |
| amino acid | amino acid | $CF_3$ | Br | SEt |
| amino acid | amino acid | $CF_3$ | Br | S-cyclopropyl |
| amino acid | amino acid | $CF_3$ | Br | F |
| amino acid | amino acid | $CF_3$ | Br | Cl |
| amino acid | amino acid | $CF_3$ | Br | Br |
| amino acid | amino acid | $CF_3$ | Br | I |
| amino acid | H | $CF_3$ | Br | H |
| amino acid | H | $CF_3$ | Br | $NH_2$ |
| amino acid | H | $CF_3$ | Br | NH-cyclopropyl |
| amino acid | H | $CF_3$ | Br | NH-methyl |
| amino acid | H | $CF_3$ | Br | NH-ethyl |
| amino acid | H | $CF_3$ | Br | NH-acetyl |
| amino acid | H | $CF_3$ | Br | OH |
| amino acid | H | $CF_3$ | Br | OMe |
| amino acid | H | $CF_3$ | Br | OEt |
| amino acid | H | $CF_3$ | Br | O-cyclopropyl |
| amino acid | H | $CF_3$ | Br | O-acetyl |
| amino acid | H | $CF_3$ | Br | SH |
| amino acid | H | $CF_3$ | Br | SMe |
| amino acid | H | $CF_3$ | Br | SEt |
| amino acid | H | $CF_3$ | Br | S-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | $CF_3$ | Br | F |
| amino acid | H | $CF_3$ | Br | Cl |
| amino acid | H | $CF_3$ | Br | Br |
| amino acid | H | $CF_3$ | Br | I |
| amino acid | acyl | $CF_3$ | Br | H |
| amino acid | acyl | $CF_3$ | Br | $NH_2$ |
| amino acid | acyl | $CF_3$ | Br | NH-cyclopropyl |
| amino acid | acyl | $CF_3$ | Br | NH-methyl |
| amino acid | acyl | $CF_3$ | Br | NH-ethyl |
| amino acid | acyl | $CF_3$ | Br | NH-acetyl |
| amino acid | acyl | $CF_3$ | Br | OH |
| amino acid | acyl | $CF_3$ | Br | OMe |
| amino acid | acyl | $CF_3$ | Br | OEt |
| amino acid | acyl | $CF_3$ | Br | O-cyclopropyl |
| amino acid | acyl | $CF_3$ | Br | O-acetyl |
| amino acid | acyl | $CF_3$ | Br | SH |
| amino acid | acyl | $CF_3$ | Br | SMe |
| amino acid | acyl | $CF_3$ | Br | SEt |
| amino acid | acyl | $CF_3$ | Br | S-cyclopropyl |
| amino acid | acyl | $CF_3$ | Br | F |
| amino acid | acyl | $CF_3$ | Br | Cl |
| amino acid | acyl | $CF_3$ | Br | Br |
| amino acid | acyl | $CF_3$ | Br | I |
| acyl | H | Br | Br | H |
| acyl | H | Br | Br | $NH_2$ |
| acyl | H | Br | Br | NH-cyclopropyl |
| acyl | H | Br | Br | NH-methyl |
| acyl | H | Br | Br | NH-ethyl |
| acyl | H | Br | Br | NH-acetyl |
| acyl | H | Br | Br | OH |
| acyl | H | Br | Br | OMe |
| acyl | H | Br | Br | OEt |
| acyl | H | Br | Br | O-cyclopropyl |
| acyl | H | Br | Br | O-acetyl |
| acyl | H | Br | Br | SH |
| acyl | H | Br | Br | SMe |
| acyl | H | Br | Br | SEt |
| acyl | H | Br | Br | S-cyclopropyl |
| acyl | H | Br | Br | F |
| acyl | H | Br | Br | Cl |
| acyl | H | Br | Br | Br |
| acyl | H | Br | Br | I |
| acyl | acyl | Br | Br | H |
| acyl | acyl | Br | Br | $NH_2$ |
| acyl | acyl | Br | Br | NH-cyclopropyl |
| acyl | acyl | Br | Br | NH-methyl |
| acyl | acyl | Br | Br | NH-ethyl |
| acyl | acyl | Br | Br | NH-acetyl |
| acyl | acyl | Br | Br | OH |
| acyl | acyl | Br | Br | OMe |
| acyl | acyl | Br | Br | OEt |
| acyl | acyl | Br | Br | O-cyclopropyl |
| acyl | acyl | Br | Br | O-acetyl |
| acyl | acyl | Br | Br | SH |
| acyl | acyl | Br | Br | SMe |
| acyl | acyl | Br | Br | SEt |
| acyl | acyl | Br | Br | S-cyclopropyl |
| acyl | acyl | Br | Br | F |
| acyl | acyl | Br | Br | Cl |
| acyl | acyl | Br | Br | Br |
| acyl | acyl | Br | Br | I |
| acyl | amino acid | Br | Br | H |
| acyl | amino acid | Br | Br | $NH_2$ |
| acyl | amino acid | Br | Br | NH-cyclopropyl |
| acyl | amino acid | Br | Br | NH-methyl |
| acyl | amino acid | Br | Br | NH-ethyl |
| acyl | amino acid | Br | Br | NH-acetyl |
| acyl | amino acid | Br | Br | OH |
| acyl | amino acid | Br | Br | OMe |
| acyl | amino acid | Br | Br | OEt |
| acyl | amino acid | Br | Br | O-cyclopropyl |
| acyl | amino acid | Br | Br | O-acetyl |
| acyl | amino acid | Br | Br | SH |
| acyl | amino acid | Br | Br | SMe |
| acyl | amino acid | Br | Br | SEt |
| acyl | amino acid | Br | Br | S-cyclopropyl |
| acyl | amino acid | Br | Br | F |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | Br | Br | Cl |
| acyl | amino acid | Br | Br | Br |
| acyl | amino acid | Br | Br | I |
| H | acyl | Br | Br | H |
| H | acyl | Br | Br | $NH_2$ |
| H | acyl | Br | Br | NH-cyclopropyl |
| H | acyl | Br | Br | NH-methyl |
| H | acyl | Br | Br | NH-ethyl |
| H | acyl | Br | Br | NH-acetyl |
| H | acyl | Br | Br | OH |
| H | acyl | Br | Br | OMe |
| H | acyl | Br | Br | OEt |
| H | acyl | Br | Br | O-cyclopropyl |
| H | acyl | Br | Br | O-acetyl |
| H | acyl | Br | Br | SH |
| H | acyl | Br | Br | SMe |
| H | acyl | Br | Br | SEt |
| H | acyl | Br | Br | S-cyclopropyl |
| H | acyl | Br | Br | F |
| H | acyl | Br | Br | Cl |
| H | acyl | Br | Br | Br |
| H | acyl | Br | Br | I |
| H | amino acid | Br | Br | H |
| H | amino acid | Br | Br | $NH_2$ |
| H | amino acid | Br | Br | NH-cyclopropyl |
| H | amino acid | Br | Br | NH-methyl |
| H | amino acid | Br | Br | NH-ethyl |
| H | amino acid | Br | Br | NH-acetyl |
| H | amino acid | Br | Br | OH |
| H | amino acid | Br | Br | OMe |
| H | amino acid | Br | Br | OEt |
| H | amino acid | Br | Br | O-cyclopropyl |
| H | amino acid | Br | Br | O-acetyl |
| H | amino acid | Br | Br | SH |
| H | amino acid | Br | Br | SMe |
| H | amino acid | Br | Br | SEt |
| H | amino acid | Br | Br | S-cyclopropyl |
| H | amino acid | Br | Br | F |
| H | amino acid | Br | Br | Cl |
| H | amino acid | Br | Br | Br |
| H | amino acid | Br | Br | I |
| amino acid | amino acid | Br | Br | H |
| amino acid | amino acid | Br | Br | $NH_2$ |
| amino acid | amino acid | Br | Br | NH-cyclopropyl |
| amino acid | amino acid | Br | Br | NH-methyl |
| amino acid | amino acid | Br | Br | NH-ethyl |
| amino acid | amino acid | Br | Br | NH-acetyl |
| amino acid | amino acid | Br | Br | OH |
| amino acid | amino acid | Br | Br | OMe |
| amino acid | amino acid | Br | Br | OEt |
| amino acid | amino acid | Br | Br | O-cyclopropyl |
| amino acid | amino acid | Br | Br | O-acetyl |
| amino acid | amino acid | Br | Br | SH |
| amino acid | amino acid | Br | Br | SMe |
| amino acid | amino acid | Br | Br | SEt |
| amino acid | amino acid | Br | Br | S-cyclopropyl |
| amino acid | amino acid | Br | Br | F |
| amino acid | amino acid | Br | Br | Cl |
| amino acid | amino acid | Br | Br | Br |
| amino acid | amino acid | Br | Br | I |
| amino acid | H | Br | Br | H |
| amino acid | H | Br | Br | $NH_2$ |
| amino acid | H | Br | Br | NH-cyclopropyl |
| amino acid | H | Br | Br | NH-methyl |
| amino acid | H | Br | Br | NH-ethyl |
| amino acid | H | Br | Br | NH-acetyl |
| amino acid | H | Br | Br | OH |
| amino acid | H | Br | Br | OMe |
| amino acid | H | Br | Br | OEt |
| amino acid | H | Br | Br | O-cyclopropyl |
| amino acid | H | Br | Br | O-acetyl |
| amino acid | H | Br | Br | SH |
| amino acid | H | Br | Br | SMe |
| amino acid | H | Br | Br | SEt |
| amino acid | H | Br | Br | S-cyclopropyl |
| amino acid | H | Br | Br | F |
| amino acid | H | Br | Br | Cl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | Br | Br | Br |
| amino acid | H | Br | Br | I |
| amino acid | acyl | Br | Br | H |
| amino acid | acyl | Br | Br | $NH_2$ |
| amino acid | acyl | Br | Br | NH-cyclopropyl |
| amino acid | acyl | Br | Br | NH-methyl |
| amino acid | acyl | Br | Br | NH-ethyl |
| amino acid | acyl | Br | Br | NH-acetyl |
| amino acid | acyl | Br | Br | OH |
| amino acid | acyl | Br | Br | OMe |
| amino acid | acyl | Br | Br | OEt |
| amino acid | acyl | Br | Br | O-cyclopropyl |
| amino acid | acyl | Br | Br | O-acetyl |
| amino acid | acyl | Br | Br | SH |
| amino acid | acyl | Br | Br | SMe |
| amino acid | acyl | Br | Br | SEt |
| amino acid | acyl | Br | Br | S-cyclopropyl |
| amino acid | acyl | Br | Br | F |
| amino acid | acyl | Br | Br | Cl |
| amino acid | acyl | Br | Br | Br |
| amino acid | acyl | Br | Br | I |
| acyl | H | Cl | Br | H |
| acyl | H | Cl | Br | $NH_2$ |
| acyl | H | Cl | Br | NH-cyclopropyl |
| acyl | H | Cl | Br | NH-methyl |
| acyl | H | Cl | Br | NH-ethyl |
| acyl | H | Cl | Br | NH-acetyl |
| acyl | H | Cl | Br | OH |
| acyl | H | Cl | Br | OMe |
| acyl | H | Cl | Br | OEt |
| acyl | H | Cl | Br | O-cyclopropyl |
| acyl | H | Cl | Br | O-acetyl |
| acyl | H | Cl | Br | SH |
| acyl | H | Cl | Br | SMe |
| acyl | H | Cl | Br | SEt |
| acyl | H | Cl | Br | S-cyclopropyl |
| acyl | H | Cl | Br | F |
| acyl | H | Cl | Br | Cl |
| acyl | H | Cl | Br | Br |
| acyl | H | Cl | Br | I |
| acyl | acyl | Cl | Br | H |
| acyl | acyl | Cl | Br | $NH_2$ |
| acyl | acyl | Cl | Br | NH-cyclopropyl |
| acyl | acyl | Cl | Br | NH-methyl |
| acyl | acyl | Cl | Br | NH-ethyl |
| acyl | acyl | Cl | Br | NH-acetyl |
| acyl | acyl | Cl | Br | OH |
| acyl | acyl | Cl | Br | OMe |
| acyl | acyl | Cl | Br | OEt |
| acyl | acyl | Cl | Br | O-cyclopropyl |
| acyl | acyl | Cl | Br | O-acetyl |
| acyl | acyl | Cl | Br | SH |
| acyl | acyl | Cl | Br | SMe |
| acyl | acyl | Cl | Br | SEt |
| acyl | acyl | Cl | Br | S-cyclopropyl |
| acyl | acyl | Cl | Br | F |
| acyl | acyl | Cl | Br | Cl |
| acyl | acyl | Cl | Br | Br |
| acyl | acyl | Cl | Br | I |
| acyl | amino acid | Cl | Br | H |
| acyl | amino acid | Cl | Br | $NH_2$ |
| acyl | amino acid | Cl | Br | NH-cyclopropyl |
| acyl | amino acid | Cl | Br | NH-methyl |
| acyl | amino acid | Cl | Br | NH-ethyl |
| acyl | amino acid | Cl | Br | NH-acetyl |
| acyl | amino acid | Cl | Br | OH |
| acyl | amino acid | Cl | Br | OMe |
| acyl | amino acid | Cl | Br | OEt |
| acyl | amino acid | Cl | Br | O-cyclopropyl |
| acyl | amino acid | Cl | Br | O-acetyl |
| acyl | amino acid | Cl | Br | SH |
| acyl | amino acid | Cl | Br | SMe |
| acyl | amino acid | Cl | Br | SEt |
| acyl | amino acid | Cl | Br | S-cyclopropyl |
| acyl | amino acid | Cl | Br | F |
| acyl | amino acid | Cl | Br | Cl |
| acyl | amino acid | Cl | Br | Br |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | Cl | Br | I |
| H | acyl | Cl | Br | H |
| H | acyl | Cl | Br | $NH_2$ |
| H | acyl | Cl | Br | NH-cyclopropyl |
| H | acyl | Cl | Br | NH-methyl |
| H | acyl | Cl | Br | NH-ethyl |
| H | acyl | Cl | Br | NH-acetyl |
| H | acyl | Cl | Br | OH |
| H | acyl | Cl | Br | OMe |
| H | acyl | Cl | Br | OEt |
| H | acyl | Cl | Br | O-cyclopropyl |
| H | acyl | Cl | Br | O-acetyl |
| H | acyl | Cl | Br | SH |
| H | acyl | Cl | Br | SMe |
| H | acyl | Cl | Br | SEt |
| H | acyl | Cl | Br | S-cyclopropyl |
| H | acyl | Cl | Br | F |
| H | acyl | Cl | Br | Cl |
| H | acyl | Cl | Br | Br |
| H | acyl | Cl | Br | I |
| H | amino acid | Cl | Br | H |
| H | amino acid | Cl | Br | $NH_2$ |
| H | amino acid | Cl | Br | NH-cyclopropyl |
| H | amino acid | Cl | Br | NH-methyl |
| H | amino acid | Cl | Br | NH-ethyl |
| H | amino acid | Cl | Br | NH-acetyl |
| H | amino acid | Cl | Br | OH |
| H | amino acid | Cl | Br | OMe |
| H | amino acid | Cl | Br | OEt |
| H | amino acid | Cl | Br | O-cyclopropyl |
| H | amino acid | Cl | Br | O-acetyl |
| H | amino acid | Cl | Br | SH |
| H | amino acid | Cl | Br | SMe |
| H | amino acid | Cl | Br | SEt |
| H | amino acid | Cl | Br | S-cyclopropyl |
| H | amino acid | Cl | Br | F |
| H | amino acid | Cl | Br | Cl |
| H | amino acid | Cl | Br | Br |
| H | amino acid | Cl | Br | I |
| amino acid | amino acid | Cl | Br | H |
| amino acid | amino acid | Cl | Br | $NH_2$ |
| amino acid | amino acid | Cl | Br | NH-cyclopropyl |
| amino acid | amino acid | Cl | Br | NH-methyl |
| amino acid | amino acid | Cl | Br | NH-ethyl |
| amino acid | amino acid | Cl | Br | NH-acetyl |
| amino acid | amino acid | Cl | Br | OH |
| amino acid | amino acid | Cl | Br | OMe |
| amino acid | amino acid | Cl | Br | OEt |
| amino acid | amino acid | Cl | Br | O-cyclopropyl |
| amino acid | amino acid | Cl | Br | O-acetyl |
| amino acid | amino acid | Cl | Br | SH |
| amino acid | amino acid | Cl | Br | SMe |
| amino acid | amino acid | Cl | Br | SEt |
| amino acid | amino acid | Cl | Br | S-cyclopropyl |
| amino acid | amino acid | Cl | Br | F |
| amino acid | amino acid | Cl | Br | Cl |
| amino acid | amino acid | Cl | Br | Br |
| amino acid | amino acid | Cl | Br | I |
| amino acid | H | Cl | Br | H |
| amino acid | H | Cl | Br | $NH_2$ |
| amino acid | H | Cl | Br | NH-cyclopropyl |
| amino acid | H | Cl | Br | NH-methyl |
| amino acid | H | Cl | Br | NH-ethyl |
| amino acid | H | Cl | Br | NH-acetyl |
| amino acid | H | Cl | Br | OH |
| amino acid | H | Cl | Br | OMe |
| amino acid | H | Cl | Br | OEt |
| amino acid | H | Cl | Br | O-cyclopropyl |
| amino acid | H | Cl | Br | O-acetyl |
| amino acid | H | Cl | Br | SH |
| amino acid | H | Cl | Br | SMe |
| amino acid | H | Cl | Br | SEt |
| amino acid | H | Cl | Br | S-cyclopropyl |
| amino acid | H | Cl | Br | F |
| amino acid | H | Cl | Br | Cl |
| amino acid | H | Cl | Br | Br |
| amino acid | H | Cl | Br | I |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | Cl | Br | H |
| amino acid | acyl | Cl | Br | $NH_2$ |
| amino acid | acyl | Cl | Br | NH-cyclopropyl |
| amino acid | acyl | Cl | Br | NH-methyl |
| amino acid | acyl | Cl | Br | NH-ethyl |
| amino acid | acyl | Cl | Br | NH-acetyl |
| amino acid | acyl | Cl | Br | OH |
| amino acid | acyl | Cl | Br | OMe |
| amino acid | acyl | Cl | Br | OEt |
| amino acid | acyl | Cl | Br | O-cyclopropyl |
| amino acid | acyl | Cl | Br | O-acetyl |
| amino acid | acyl | Cl | Br | SH |
| amino acid | acyl | Cl | Br | SMe |
| amino acid | acyl | Cl | Br | SEt |
| amino acid | acyl | Cl | Br | S-cyclopropyl |
| amino acid | acyl | Cl | Br | F |
| amino acid | acyl | Cl | Br | Cl |
| amino acid | acyl | Cl | Br | Br |
| amino acid | acyl | Cl | Br | I |
| acyl | H | F | Br | H |
| acyl | H | F | Br | $NH_2$ |
| acyl | H | F | Br | NH-cyclopropyl |
| acyl | H | F | Br | NH-methyl |
| acyl | H | F | Br | NH-ethyl |
| acyl | H | F | Br | NH-acetyl |
| acyl | H | F | Br | OH |
| acyl | H | F | Br | OMe |
| acyl | H | F | Br | OEt |
| acyl | H | F | Br | O-cyclopropyl |
| acyl | H | F | Br | O-acetyl |
| acyl | H | F | Br | SH |
| acyl | H | F | Br | SMe |
| acyl | H | F | Br | SEt |
| acyl | H | F | Br | S-cyclopropyl |
| acyl | H | F | Br | F |
| acyl | H | F | Br | Cl |
| acyl | H | F | Br | Br |
| acyl | H | F | Br | I |
| acyl | acyl | F | Br | H |
| acyl | acyl | F | Br | $NH_2$ |
| acyl | acyl | F | Br | NH-cyclopropyl |
| acyl | acyl | F | Br | NH-methyl |
| acyl | acyl | F | Br | NH-ethyl |
| acyl | acyl | F | Br | NH-acetyl |
| acyl | acyl | F | Br | OH |
| acyl | acyl | F | Br | OMe |
| acyl | acyl | F | Br | OEt |
| acyl | acyl | F | Br | O-cyclopropyl |
| acyl | acyl | F | Br | O-acetyl |
| acyl | acyl | F | Br | SH |
| acyl | acyl | F | Br | SMe |
| acyl | acyl | F | Br | SEt |
| acyl | acyl | F | Br | S-cyclopropyl |
| acyl | acyl | F | Br | F |
| acyl | acyl | F | Br | Cl |
| acyl | acyl | F | Br | Br |
| acyl | acyl | F | Br | I |
| acyl | amino acid | F | Br | H |
| acyl | amino acid | F | Br | $NH_2$ |
| acyl | amino acid | F | Br | NH-cyclopropyl |
| acyl | amino acid | F | Br | NH-methyl |
| acyl | amino acid | F | Br | NH-ethyl |
| acyl | amino acid | F | Br | NH-acetyl |
| acyl | amino acid | F | Br | OH |
| acyl | amino acid | F | Br | OMe |
| acyl | amino acid | F | Br | OEt |
| acyl | amino acid | F | Br | O-cyclopropyl |
| acyl | amino acid | F | Br | O-acetyl |
| acyl | amino acid | F | Br | SH |
| acyl | amino acid | F | Br | SMe |
| acyl | amino acid | F | Br | SEt |
| acyl | amino acid | F | Br | S-cyclopropyl |
| acyl | amino acid | F | Br | F |
| acyl | amino acid | F | Br | Cl |
| acyl | amino acid | F | Br | Br |
| acyl | amino acid | F | Br | I |
| H | acyl | F | Br | H |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | F | Br | $NH_2$ |
| H | acyl | F | Br | NH-cyclopropyl |
| H | acyl | F | Br | NH-methyl |
| H | acyl | F | Br | NH-ethyl |
| H | acyl | F | Br | NH-acetyl |
| H | acyl | F | Br | OH |
| H | acyl | F | Br | OMe |
| H | acyl | F | Br | OEt |
| H | acyl | F | Br | O-cyclopropyl |
| H | acyl | F | Br | O-acetyl |
| H | acyl | F | Br | SH |
| H | acyl | F | Br | SMe |
| H | acyl | F | Br | SEt |
| H | acyl | F | Br | S-cyclopropyl |
| H | acyl | F | Br | F |
| H | acyl | F | Br | Cl |
| H | acyl | F | Br | Br |
| H | acyl | F | Br | I |
| H | amino acid | F | Br | H |
| H | amino acid | F | Br | $NH_2$ |
| H | amino acid | F | Br | NH-cyclopropyl |
| H | amino acid | F | Br | NH-methyl |
| H | amino acid | F | Br | NH-ethyl |
| H | amino acid | F | Br | NH-acetyl |
| H | amino acid | F | Br | OH |
| H | amino acid | F | Br | OMe |
| H | amino acid | F | Br | OEt |
| H | amino acid | F | Br | O-cyclopropyl |
| H | amino acid | F | Br | O-acetyl |
| H | amino acid | F | Br | SH |
| H | amino acid | F | Br | SMe |
| H | amino acid | F | Br | SEt |
| H | amino acid | F | Br | S-cyclopropyl |
| H | amino acid | F | Br | F |
| H | amino acid | F | Br | Cl |
| H | amino acid | F | Br | Br |
| H | amino acid | F | Br | I |
| amino acid | amino acid | F | Br | H |
| amino acid | amino acid | F | Br | $NH_2$ |
| amino acid | amino acid | F | Br | NH-cyclopropyl |
| amino acid | amino acid | F | Br | NH-methyl |
| amino acid | amino acid | F | Br | NH-ethyl |
| amino acid | amino acid | F | Br | NH-acetyl |
| amino acid | amino acid | F | Br | OH |
| amino acid | amino acid | F | Br | OMe |
| amino acid | amino acid | F | Br | OEt |
| amino acid | amino acid | F | Br | O-cyclopropyl |
| amino acid | amino acid | F | Br | O-acetyl |
| amino acid | amino acid | F | Br | SH |
| amino acid | amino acid | F | Br | SMe |
| amino acid | amino acid | F | Br | SEt |
| amino acid | amino acid | F | Br | S-cyclopropyl |
| amino acid | amino acid | F | Br | F |
| amino acid | amino acid | F | Br | Cl |
| amino acid | amino acid | F | Br | Br |
| amino acid | amino acid | F | Br | I |
| amino acid | H | F | Br | H |
| amino acid | H | F | Br | $NH_2$ |
| amino acid | H | F | Br | NH-cyclopropyl |
| amino acid | H | F | Br | NH-methyl |
| amino acid | H | F | Br | NH-ethyl |
| amino acid | H | F | Br | NH-acetyl |
| amino acid | H | F | Br | OH |
| amino acid | H | F | Br | OMe |
| amino acid | H | F | Br | OEt |
| amino acid | H | F | Br | O-cyclopropyl |
| amino acid | H | F | Br | O-acetyl |
| amino acid | H | F | Br | SH |
| amino acid | H | F | Br | SMe |
| amino acid | H | F | Br | SEt |
| amino acid | H | F | Br | S-cyclopropyl |
| amino acid | H | F | Br | F |
| amino acid | H | F | Br | Cl |
| amino acid | H | F | Br | Br |
| amino acid | H | F | Br | I |
| amino acid | acyl | F | Br | H |
| amino acid | acyl | F | Br | $NH_2$ |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | F | Br | NH-cyclopropyl |
| amino acid | acyl | F | Br | NH-methyl |
| amino acid | acyl | F | Br | NH-ethyl |
| amino acid | acyl | F | Br | NH-acetyl |
| amino acid | acyl | F | Br | OH |
| amino acid | acyl | F | Br | OMe |
| amino acid | acyl | F | Br | OEt |
| amino acid | acyl | F | Br | O-cyclopropyl |
| amino acid | acyl | F | Br | O-acetyl |
| amino acid | acyl | F | Br | SH |
| amino acid | acyl | F | Br | SMe |
| amino acid | acyl | F | Br | SEt |
| amino acid | acyl | F | Br | S-cyclopropyl |
| amino acid | acyl | F | Br | F |
| amino acid | acyl | F | Br | Cl |
| amino acid | acyl | F | Br | Br |
| amino acid | acyl | F | Br | I |
| acyl | H | $NH_2$ | Br | H |
| acyl | H | $NH_2$ | Br | $NH_2$ |
| acyl | H | $NH_2$ | Br | NH-cyclopropyl |
| acyl | H | $NH_2$ | Br | NH-methyl |
| acyl | H | $NH_2$ | Br | NH-ethyl |
| acyl | H | $NH_2$ | Br | NH-acetyl |
| acyl | H | $NH_2$ | Br | OH |
| acyl | H | $NH_2$ | Br | OMe |
| acyl | H | $NH_2$ | Br | OEt |
| acyl | H | $NH_2$ | Br | O-cyclopropyl |
| acyl | H | $NH_2$ | Br | O-acetyl |
| acyl | H | $NH_2$ | Br | SH |
| acyl | H | $NH_2$ | Br | SMe |
| acyl | H | $NH_2$ | Br | SEt |
| acyl | H | $NH_2$ | Br | S-cyclopropyl |
| acyl | H | $NH_2$ | Br | F |
| acyl | H | $NH_2$ | Br | Cl |
| acyl | H | $NH_2$ | Br | Br |
| acyl | H | $NH_2$ | Br | I |
| acyl | acyl | $NH_2$ | Br | H |
| acyl | acyl | $NH_2$ | Br | $NH_2$ |
| acyl | acyl | $NH_2$ | Br | NH-cyclopropyl |
| acyl | acyl | $NH_2$ | Br | NH-methyl |
| acyl | acyl | $NH_2$ | Br | NH-ethyl |
| acyl | acyl | $NH_2$ | Br | NH-acetyl |
| acyl | acyl | $NH_2$ | Br | OH |
| acyl | acyl | $NH_2$ | Br | OMe |
| acyl | acyl | $NH_2$ | Br | OEt |
| acyl | acyl | $NH_2$ | Br | O-cyclopropyl |
| acyl | acyl | $NH_2$ | Br | O-acetyl |
| acyl | acyl | $NH_2$ | Br | SH |
| acyl | acyl | $NH_2$ | Br | SMe |
| acyl | acyl | $NH_2$ | Br | SEt |
| acyl | acyl | $NH_2$ | Br | S-cyclopropyl |
| acyl | acyl | $NH_2$ | Br | F |
| acyl | acyl | $NH_2$ | Br | Cl |
| acyl | acyl | $NH_2$ | Br | Br |
| acyl | acyl | $NH_2$ | Br | I |
| acyl | amino acid | $NH_2$ | Br | H |
| acyl | amino acid | $NH_2$ | Br | $NH_2$ |
| acyl | amino acid | $NH_2$ | Br | NH-cyclopropyl |
| acyl | amino acid | $NH_2$ | Br | NH-methyl |
| acyl | amino acid | $NH_2$ | Br | NH-ethyl |
| acyl | amino acid | $NH_2$ | Br | NH-acetyl |
| acyl | amino acid | $NH_2$ | Br | OH |
| acyl | amino acid | $NH_2$ | Br | OMe |
| acyl | amino acid | $NH_2$ | Br | OEt |
| acyl | amino acid | $NH_2$ | Br | O-cyclopropyl |
| acyl | amino acid | $NH_2$ | Br | O-acetyl |
| acyl | amino acid | $NH_2$ | Br | SH |
| acyl | amino acid | $NH_2$ | Br | SMe |
| acyl | amino acid | $NH_2$ | Br | SEt |
| acyl | amino acid | $NH_2$ | Br | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | Br | F |
| acyl | amino acid | $NH_2$ | Br | Cl |
| acyl | amino acid | $NH_2$ | Br | Br |
| acyl | amino acid | $NH_2$ | Br | I |
| H | acyl | $NH_2$ | Br | H |
| H | acyl | $NH_2$ | Br | $NH_2$ |
| H | acyl | $NH_2$ | Br | NH-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | $NH_2$ | Br | NH-methyl |
| H | acyl | $NH_2$ | Br | NH-ethyl |
| H | acyl | $NH_2$ | Br | NH-acetyl |
| H | acyl | $NH_2$ | Br | OH |
| H | acyl | $NH_2$ | Br | OMe |
| H | acyl | $NH_2$ | Br | OEt |
| H | acyl | $NH_2$ | Br | O-cyclopropyl |
| H | acyl | $NH_2$ | Br | O-acetyl |
| H | acyl | $NH_2$ | Br | SH |
| H | acyl | $NH_2$ | Br | SMe |
| H | acyl | $NH_2$ | Br | SEt |
| H | acyl | $NH_2$ | Br | S-cyclopropyl |
| H | acyl | $NH_2$ | Br | F |
| H | acyl | $NH_2$ | Br | Cl |
| H | acyl | $NH_2$ | Br | Br |
| H | acyl | $NH_2$ | Br | I |
| H | amino acid | $NH_2$ | Br | H |
| H | amino acid | $NH_2$ | Br | $NH_2$ |
| H | amino acid | $NH_2$ | Br | NH-cyclopropyl |
| H | amino acid | $NH_2$ | Br | NH-methyl |
| H | amino acid | $NH_2$ | Br | NH-ethyl |
| H | amino acid | $NH_2$ | Br | NH-acetyl |
| H | amino acid | $NH_2$ | Br | OH |
| H | amino acid | $NH_2$ | Br | OMe |
| H | amino acid | $NH_2$ | Br | OEt |
| H | amino acid | $NH_2$ | Br | O-cyclopropyl |
| H | amino acid | $NH_2$ | Br | O-acetyl |
| H | amino acid | $NH_2$ | Br | SH |
| H | amino acid | $NH_2$ | Br | SMe |
| H | amino acid | $NH_2$ | Br | SEt |
| H | amino acid | $NH_2$ | Br | S-cyclopropyl |
| H | amino acid | $NH_2$ | Br | F |
| H | amino acid | $NH_2$ | Br | Cl |
| H | amino acid | $NH_2$ | Br | Br |
| H | amino acid | $NH_2$ | Br | I |
| amino acid | amino acid | $NH_2$ | Br | H |
| amino acid | amino acid | $NH_2$ | Br | $NH_2$ |
| amino acid | amino acid | $NH_2$ | Br | NH-cyclopropyl |
| amino acid | amino acid | $NH_2$ | Br | NH-methyl |
| amino acid | amino acid | $NH_2$ | Br | NH-ethyl |
| amino acid | amino acid | $NH_2$ | Br | NH-acetyl |
| amino acid | amino acid | $NH_2$ | Br | OH |
| amino acid | amino acid | $NH_2$ | Br | OMe |
| amino acid | amino acid | $NH_2$ | Br | OEt |
| amino acid | amino acid | $NH_2$ | Br | O-cyclopropyl |
| amino acid | amino acid | $NH_2$ | Br | O-acetyl |
| amino acid | amino acid | $NH_2$ | Br | SH |
| amino acid | amino acid | $NH_2$ | Br | SMe |
| amino acid | amino acid | $NH_2$ | Br | SEt |
| amino acid | amino acid | $NH_2$ | Br | S-cyclopropyl |
| amino acid | amino acid | $NH_2$ | Br | F |
| amino acid | amino acid | $NH_2$ | Br | Cl |
| amino acid | amino acid | $NH_2$ | Br | Br |
| amino acid | amino acid | $NH_2$ | Br | I |
| amino acid | H | $NH_2$ | Br | H |
| amino acid | H | $NH_2$ | Br | $NH_2$ |
| amino acid | H | $NH_2$ | Br | NH-cyclopropyl |
| amino acid | H | $NH_2$ | Br | NH-methyl |
| amino acid | H | $NH_2$ | Br | NH-ethyl |
| amino acid | H | $NH_2$ | Br | NH-acetyl |
| amino acid | H | $NH_2$ | Br | OH |
| amino acid | H | $NH_2$ | Br | OMe |
| amino acid | H | $NH_2$ | Br | OEt |
| amino acid | H | $NH_2$ | Br | O-cyclopropyl |
| amino acid | H | $NH_2$ | Br | O-acetyl |
| amino acid | H | $NH_2$ | Br | SH |
| amino acid | H | $NH_2$ | Br | SMe |
| amino acid | H | $NH_2$ | Br | SEt |
| amino acid | H | $NH_2$ | Br | S-cyclopropyl |
| amino acid | H | $NH_2$ | Br | F |
| amino acid | H | $NH_2$ | Br | Cl |
| amino acid | H | $NH_2$ | Br | Br |
| amino acid | H | $NH_2$ | Br | I |
| amino acid | acyl | $NH_2$ | Br | H |
| amino acid | acyl | $NH_2$ | Br | $NH_2$ |
| amino acid | acyl | $NH_2$ | Br | NH-cyclopropyl |
| amino acid | acyl | $NH_2$ | Br | NH-methyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | $NH_2$ | Br | NH-ethyl |
| amino acid | acyl | $NH_2$ | Br | NH-acetyl |
| amino acid | acyl | $NH_2$ | Br | OH |
| amino acid | acyl | $NH_2$ | Br | OMe |
| amino acid | acyl | $NH_2$ | Br | OEt |
| amino acid | acyl | $NH_2$ | Br | O-cyclopropyl |
| amino acid | acyl | $NH_2$ | Br | O-acetyl |
| amino acid | acyl | $NH_2$ | Br | SH |
| amino acid | acyl | $NH_2$ | Br | SMe |
| amino acid | acyl | $NH_2$ | Br | SEt |
| amino acid | acyl | $NH_2$ | Br | S-cyclopropyl |
| amino acid | acyl | $NH_2$ | Br | F |
| amino acid | acyl | $NH_2$ | Br | Cl |
| amino acid | acyl | $NH_2$ | Br | Br |
| amino acid | acyl | $NH_2$ | Br | I |
| acyl | H | SH | Br | H |
| acyl | H | SH | Br | $NH_2$ |
| acyl | H | SH | Br | NH-cyclopropyl |
| acyl | H | SH | Br | NH-methyl |
| acyl | H | SH | Br | NH-ethyl |
| acyl | H | SH | Br | NH-acetyl |
| acyl | H | SH | Br | OH |
| acyl | H | SH | Br | OMe |
| acyl | H | SH | Br | OEt |
| acyl | H | SH | Br | O-cyclopropyl |
| acyl | H | SH | Br | O-acetyl |
| acyl | H | SH | Br | SH |
| acyl | H | SH | Br | SMe |
| acyl | H | SH | Br | SEt |
| acyl | H | SH | Br | S-cyclopropyl |
| acyl | H | SH | Br | F |
| acyl | H | SH | Br | Cl |
| acyl | H | SH | Br | Br |
| acyl | H | SH | Br | I |
| acyl | acyl | SH | Br | H |
| acyl | acyl | SH | Br | $NH_2$ |
| acyl | acyl | SH | Br | NH-cyclopropyl |
| acyl | acyl | SH | Br | NH-methyl |
| acyl | acyl | SH | Br | NH-ethyl |
| acyl | acyl | SH | Br | NH-acetyl |
| acyl | acyl | SH | Br | OH |
| acyl | acyl | SH | Br | OMe |
| acyl | acyl | SH | Br | OEt |
| acyl | acyl | SH | Br | O-cyclopropyl |
| acyl | acyl | SH | Br | O-acetyl |
| acyl | acyl | SH | Br | SH |
| acyl | acyl | SH | Br | SMe |
| acyl | acyl | SH | Br | SEt |
| acyl | acyl | SH | Br | S-cyclopropyl |
| acyl | acyl | SH | Br | F |
| acyl | acyl | SH | Br | Cl |
| acyl | acyl | SH | Br | Br |
| acyl | acyl | SH | Br | I |
| acyl | amino acid | SH | Br | H |
| acyl | amino acid | SH | Br | $NH_2$ |
| acyl | amino acid | SH | Br | NH-cyclopropyl |
| acyl | amino acid | SH | Br | NH-methyl |
| acyl | amino acid | SH | Br | NH-ethyl |
| acyl | amino acid | SH | Br | NH-acetyl |
| acyl | amino acid | SH | Br | OH |
| acyl | amino acid | SH | Br | OMe |
| acyl | amino acid | SH | Br | OEt |
| acyl | amino acid | SH | Br | O-cyclopropyl |
| acyl | amino acid | SH | Br | O-acetyl |
| acyl | amino acid | SH | Br | SH |
| acyl | amino acid | SH | Br | SMe |
| acyl | amino acid | SH | Br | SEt |
| acyl | amino acid | SH | Br | S-cyclopropyl |
| acyl | amino acid | SH | Br | F |
| acyl | amino acid | SH | Br | Cl |
| acyl | amino acid | SH | Br | Br |
| acyl | amino acid | SH | Br | I |
| H | acyl | SH | Br | H |
| H | acyl | SH | Br | $NH_2$ |
| H | acyl | SH | Br | NH-cyclopropyl |
| H | acyl | SH | Br | NH-methyl |
| H | acyl | SH | Br | NH-ethyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | SH | Br | NH-acetyl |
| H | acyl | SH | Br | OH |
| H | acyl | SH | Br | OMe |
| H | acyl | SH | Br | OEt |
| H | acyl | SH | Br | O-cyclopropyl |
| H | acyl | SH | Br | O-acetyl |
| H | acyl | SH | Br | SH |
| H | acyl | SH | Br | SMe |
| H | acyl | SH | Br | SEt |
| H | acyl | SH | Br | S-cyclopropyl |
| H | acyl | SH | Br | F |
| H | acyl | SH | Br | Cl |
| H | acyl | SH | Br | Br |
| H | acyl | SH | Br | I |
| H | amino acid | SH | Br | H |
| H | amino acid | SH | Br | $NH_2$ |
| H | amino acid | SH | Br | NH-cyclopropyl |
| H | amino acid | SH | Br | NH-methyl |
| H | amino acid | SH | Br | NH-ethyl |
| H | amino acid | SH | Br | NH-acetyl |
| H | amino acid | SH | Br | OH |
| H | amino acid | SH | Br | OMe |
| H | amino acid | SH | Br | OEt |
| H | amino acid | SH | Br | O-cyclopropyl |
| H | amino acid | SH | Br | O-acetyl |
| H | amino acid | SH | Br | SH |
| H | amino acid | SH | Br | SMe |
| H | amino acid | SH | Br | SEt |
| H | amino acid | SH | Br | S-cyclopropyl |
| H | amino acid | SH | Br | F |
| H | amino acid | SH | Br | Cl |
| H | amino acid | SH | Br | Br |
| H | amino acid | SH | Br | I |
| amino acid | amino acid | SH | Br | H |
| amino acid | amino acid | SH | Br | $NH_2$ |
| amino acid | amino acid | SH | Br | NH-cyclopropyl |
| amino acid | amino acid | SH | Br | NH-methyl |
| amino acid | amino acid | SH | Br | NH-ethyl |
| amino acid | amino acid | SH | Br | NH-acetyl |
| amino acid | amino acid | SH | Br | OH |
| amino acid | amino acid | SH | Br | OMe |
| amino acid | amino acid | SH | Br | OEt |
| amino acid | amino acid | SH | Br | O-cyclopropyl |
| amino acid | amino acid | SH | Br | O-acetyl |
| amino acid | amino acid | SH | Br | SH |
| amino acid | amino acid | SH | Br | SMe |
| amino acid | amino acid | SH | Br | SEt |
| amino acid | amino acid | SH | Br | S-cyclopropyl |
| amino acid | amino acid | SH | Br | F |
| amino acid | amino acid | SH | Br | Cl |
| amino acid | amino acid | SH | Br | Br |
| amino acid | amino acid | SH | Br | I |
| amino acid | H | SH | Br | H |
| amino acid | H | SH | Br | $NH_2$ |
| amino acid | H | SH | Br | NH-cyclopropyl |
| amino acid | H | SH | Br | NH-methyl |
| amino acid | H | SH | Br | NH-ethyl |
| amino acid | H | SH | Br | NH-acetyl |
| amino acid | H | SH | Br | OH |
| amino acid | H | SH | Br | OMe |
| amino acid | H | SH | Br | OEt |
| amino acid | H | SH | Br | O-cyclopropyl |
| amino acid | H | SH | Br | O-acetyl |
| amino acid | H | SH | Br | SH |
| amino acid | H | SH | Br | SMe |
| amino acid | H | SH | Br | SEt |
| amino acid | H | SH | Br | S-cyclopropyl |
| amino acid | H | SH | Br | F |
| amino acid | H | SH | Br | Cl |
| amino acid | H | SH | Br | Br |
| amino acid | H | SH | Br | I |
| amino acid | acyl | SH | Br | H |
| amino acid | acyl | SH | Br | $NH_2$ |
| amino acid | acyl | SH | Br | NH-cyclopropyl |
| amino acid | acyl | SH | Br | NH-methyl |
| amino acid | acyl | SH | Br | NH-ethyl |
| amino acid | acyl | SH | Br | NH-acetyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | SH | Br | OH |
| amino acid | acyl | SH | Br | OMe |
| amino acid | acyl | SH | Br | OEt |
| amino acid | acyl | SH | Br | O-cyclopropyl |
| amino acid | acyl | SH | Br | O-acetyl |
| amino acid | acyl | SH | Br | SH |
| amino acid | acyl | SH | Br | SMe |
| amino acid | acyl | SH | Br | SEt |
| amino acid | acyl | SH | Br | S-cyclopropyl |
| amino acid | acyl | SH | Br | F |
| amino acid | acyl | SH | Br | Cl |
| amino acid | acyl | SH | Br | Br |
| amino acid | acyl | SH | Br | I |
| acyl | H | OH | Br | H |
| acyl | H | OH | Br | $NH_2$ |
| acyl | H | OH | Br | NH-cyclopropyl |
| acyl | H | OH | Br | NH-methyl |
| acyl | H | OH | Br | NH-ethyl |
| acyl | H | OH | Br | NH-acetyl |
| acyl | H | OH | Br | OH |
| acyl | H | OH | Br | OMe |
| acyl | H | OH | Br | OEt |
| acyl | H | OH | Br | O-cyclopropyl |
| acyl | H | OH | Br | O-acetyl |
| acyl | H | OH | Br | SH |
| acyl | H | OH | Br | SMe |
| acyl | H | OH | Br | SEt |
| acyl | H | OH | Br | S-cyclopropyl |
| acyl | H | OH | Br | F |
| acyl | H | OH | Br | Cl |
| acyl | H | OH | Br | Br |
| acyl | H | OH | Br | I |
| acyl | acyl | OH | Br | H |
| acyl | acyl | OH | Br | $NH_2$ |
| acyl | acyl | OH | Br | N-cyclopropyl |
| acyl | acyl | OH | Br | NH-methyl |
| acyl | acyl | OH | Br | NH-ethyl |
| acyl | acyl | OH | Br | NH-acetyl |
| acyl | acyl | OH | Br | OH |
| acyl | acyl | OH | Br | OMe |
| acyl | acyl | OH | Br | OEt |
| acyl | acyl | OH | Br | O-cyclopropyl |
| acyl | acyl | OH | Br | O-acetyl |
| acyl | acyl | OH | Br | SH |
| acyl | acyl | OH | Br | SMe |
| acyl | acyl | OH | Br | SEt |
| acyl | acyl | OH | Br | S-cyclopropyl |
| acyl | acyl | OH | Br | F |
| acyl | acyl | OH | Br | Cl |
| acyl | acyl | OH | Br | Br |
| acyl | acyl | OH | Br | I |
| acyl | amino acid | OH | Br | H |
| acyl | amino acid | OH | Br | $NH_2$ |
| acyl | amino acid | OH | Br | NH-cyclopropyl |
| acyl | amino acid | OH | Br | NH-methyl |
| acyl | amino acid | OH | Br | NH-ethyl |
| acyl | amino acid | OH | Br | NH-acetyl |
| acyl | amino acid | OH | Br | OH |
| acyl | amino acid | OH | Br | OMe |
| acyl | amino acid | OH | Br | OEt |
| acyl | amino acid | OH | Br | O-cyclopropyl |
| acyl | amino acid | OH | Br | O-acetyl |
| acyl | amino acid | OH | Br | SH |
| acyl | amino acid | OH | Br | SMe |
| acyl | amino acid | OH | Br | SEt |
| acyl | amino acid | OH | Br | S-cyclopropyl |
| acyl | amino acid | OH | Br | F |
| acyl | amino acid | OH | Br | Cl |
| acyl | amino acid | OH | Br | Br |
| acyl | amino acid | OH | Br | I |
| H | acyl | OH | Br | H |
| H | acyl | OH | Br | $NH_2$ |
| H | acyl | OH | Br | NH-cyclopropyl |
| H | acyl | OH | Br | NH-methyl |
| H | acyl | OH | Br | NH-ethyl |
| H | acyl | OH | Br | NH-acetyl |
| H | acyl | OH | Br | OH |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | OH | Br | OMe |
| H | acyl | OH | Br | OEt |
| H | acyl | OH | Br | O-cyclopropyl |
| H | acyl | OH | Br | O-acetyl |
| H | acyl | OH | Br | SH |
| H | acyl | OH | Br | SMe |
| H | acyl | OH | Br | SEt |
| H | acyl | OH | Br | S-cyclopropyl |
| H | acyl | OH | Br | F |
| H | acyl | OH | Br | Cl |
| H | acyl | OH | Br | Br |
| H | acyl | OH | Br | I |
| H | amino acid | OH | Br | H |
| H | amino acid | OH | Br | $NH_2$ |
| H | amino acid | OH | Br | NH-cyclopropyl |
| H | amino acid | OH | Br | NH-methyl |
| H | amino acid | OH | Br | NH-ethyl |
| H | amino acid | OH | Br | NH-acetyl |
| H | amino acid | OH | Br | OH |
| H | amino acid | OH | Br | OMe |
| H | amino acid | OH | Br | OEt |
| H | amino acid | OH | Br | O-cyclopropyl |
| H | amino acid | OH | Br | O-acetyl |
| H | amino acid | OH | Br | SH |
| H | amino acid | OH | Br | SMe |
| H | amino acid | OH | Br | SEt |
| H | amino acid | OH | Br | S-cyclopropyl |
| H | amino acid | OH | Br | F |
| H | amino acid | OH | Br | Cl |
| H | amino acid | OH | Br | Br |
| H | amino acid | OH | Br | I |
| amino acid | amino acid | OH | Br | H |
| amino acid | amino acid | OH | Br | $NH_2$ |
| amino acid | amino acid | OH | Br | NH-cyclopropyl |
| amino acid | amino acid | OH | Br | NH-methyl |
| amino acid | amino acid | OH | Br | NH-ethyl |
| amino acid | amino acid | OH | Br | NH-acetyl |
| amino acid | amino acid | OH | Br | OH |
| amino acid | amino acid | OH | Br | OMe |
| amino acid | amino acid | OH | Br | OEt |
| amino acid | amino acid | OH | Br | O-cyclopropyl |
| amino acid | amino acid | OH | Br | O-acetyl |
| amino acid | amino acid | OH | Br | SH |
| amino acid | amino acid | OH | Br | SMe |
| amino acid | amino acid | OH | Br | SEt |
| amino acid | amino acid | OH | Br | S-cyclopropyl |
| amino acid | amino acid | OH | Br | F |
| amino acid | amino acid | OH | Br | Cl |
| amino acid | amino acid | OH | Br | Br |
| amino acid | amino acid | OH | Br | I |
| amino acid | H | OH | Br | H |
| amino acid | H | OH | Br | $NH_2$ |
| amino acid | H | OH | Br | NH-cyclopropyl |
| amino acid | H | OH | Br | NH-methyl |
| amino acid | H | OH | Br | NH-ethyl |
| amino acid | H | OH | Br | NH-acetyl |
| amino acid | H | OH | Br | OH |
| amino acid | H | OH | Br | OMe |
| amino acid | H | OH | Br | OEt |
| amino acid | H | OH | Br | O-cyclopropyl |
| amino acid | H | OH | Br | O-acetyl |
| amino acid | H | OH | Br | SH |
| amino acid | H | OH | Br | SMe |
| amino acid | H | OH | Br | SEt |
| amino acid | H | OH | Br | S-cyclopropyl |
| amino acid | H | OH | Br | F |
| amino acid | H | OH | Br | Cl |
| amino acid | H | OH | Br | Br |
| amino acid | H | OH | Br | I |
| amino acid | acyl | OH | Br | H |
| amino acid | acyl | OH | Br | $NH_2$ |
| amino acid | acyl | OH | Br | NH-cyclopropyl |
| amino acid | acyl | OH | Br | NH-methyl |
| amino acid | acyl | OH | Br | NH-ethyl |
| amino acid | acyl | OH | Br | NH-acetyl |
| amino acid | acyl | OH | Br | OH |
| amino acid | acyl | OH | Br | OMe |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | OH | Br | OEt |
| amino acid | acyl | OH | Br | O-cyclopropyl |
| amino acid | acyl | OH | Br | O-acetyl |
| amino acid | acyl | OH | Br | SH |
| amino acid | acyl | OH | Br | SMe |
| amino acid | acyl | OH | Br | SEt |
| amino acid | acyl | OH | Br | S-cyclopropyl |
| amino acid | acyl | OH | Br | F |
| amino acid | acyl | OH | Br | Cl |
| amino acid | acyl | OH | Br | Br |
| amino acid | acyl | OH | Br | I |
| acyl | H | $CH_3$ | Cl | H |
| acyl | H | $CH_3$ | Cl | $NH_2$ |
| acyl | H | $CH_3$ | Cl | NH-cyclopropyl |
| acyl | H | $CH_3$ | Cl | NH-methyl |
| acyl | H | $CH_3$ | Cl | NH-ethyl |
| acyl | H | $CH_3$ | Cl | NH-acetyl |
| acyl | H | $CH_3$ | Cl | OH |
| acyl | H | $CH_3$ | Cl | OMe |
| acyl | H | $CH_3$ | Cl | OEt |
| acyl | H | $CH_3$ | Cl | O-cyclopropyl |
| acyl | H | $CH_3$ | Cl | O-acetyl |
| acyl | H | $CH_3$ | Cl | SH |
| acyl | H | $CH_3$ | Cl | SMe |
| acyl | H | $CH_3$ | Cl | SEt |
| acyl | H | $CH_3$ | Cl | S-cyclopropyl |
| acyl | H | $CH_3$ | Cl | F |
| acyl | H | $CH_3$ | Cl | Cl |
| acyl | H | $CH_3$ | Cl | Br |
| acyl | H | $CH_3$ | Cl | I |
| acyl | acyl | $CH_3$ | Cl | H |
| acyl | acyl | $CH_3$ | Cl | $NH_2$ |
| acyl | acyl | $CH_3$ | Cl | NH-cyclopropyl |
| acyl | acyl | $CH_3$ | Cl | NH-methyl |
| acyl | acyl | $CH_3$ | Cl | NH-ethyl |
| acyl | acyl | $CH_3$ | Cl | NH-acetyl |
| acyl | acyl | $CH_3$ | Cl | OH |
| acyl | acyl | $CH_3$ | Cl | OMe |
| acyl | acyl | $CH_3$ | Cl | OEt |
| acyl | acyl | $CH_3$ | Cl | O-cyclopropyl |
| acyl | acyl | $CH_3$ | Cl | O-acetyl |
| acyl | acyl | $CH_3$ | Cl | SH |
| acyl | acyl | $CH_3$ | Cl | SMe |
| acyl | acyl | $CH_3$ | Cl | SEt |
| acyl | acyl | $CH_3$ | Cl | S-cyclopropyl |
| acyl | acyl | $CH_3$ | Cl | F |
| acyl | acyl | $CH_3$ | Cl | Cl |
| acyl | acyl | $CH_3$ | Cl | Br |
| acyl | acyl | $CH_3$ | Cl | I |
| acyl | amino acid | $CH_3$ | Cl | H |
| acyl | amino acid | $CH_3$ | Cl | $NH_2$ |
| acyl | amino acid | $CH_3$ | Cl | NH-cyclopropyl |
| acyl | amino acid | $CH_3$ | Cl | NH-methyl |
| acyl | amino acid | $CH_3$ | Cl | NH-ethyl |
| acyl | amino acid | $CH_3$ | Cl | NH-acetyl |
| acyl | amino acid | $CH_3$ | Cl | OH |
| acyl | amino acid | $CH_3$ | Cl | OMe |
| acyl | amino acid | $CH_3$ | Cl | OEt |
| acyl | amino acid | $CH_3$ | Cl | O-cyclopropyl |
| acyl | amino acid | $CH_3$ | Cl | O-acetyl |
| acyl | amino acid | $CH_3$ | Cl | SH |
| acyl | amino acid | $CH_3$ | Cl | SMe |
| acyl | amino acid | $CH_3$ | Cl | SEt |
| acyl | amino acid | $CH_3$ | Cl | S-cyclopropyl |
| acyl | amino acid | $CH_3$ | Cl | F |
| acyl | amino acid | $CH_3$ | Cl | Cl |
| acyl | amino acid | $CH_3$ | Cl | Br |
| acyl | amino acid | $CH_3$ | Cl | I |
| H | acyl | $CH_3$ | Cl | H |
| H | acyl | $CH_3$ | Cl | $NH_2$ |
| H | acyl | $CH_3$ | Cl | NH-cyclopropyl |
| H | acyl | $CH_3$ | Cl | NH-methyl |
| H | acyl | $CH_3$ | Cl | NH-ethyl |
| H | acyl | $CH_3$ | Cl | NH-acetyl |
| H | acyl | $CH_3$ | Cl | OH |
| H | acyl | $CH_3$ | Cl | OMe |
| H | acyl | $CH_3$ | Cl | OEt |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | $CH_3$ | Cl | O-cyclopropyl |
| H | acyl | $CH_3$ | Cl | O-acetyl |
| H | acyl | $CH_3$ | Cl | SH |
| H | acyl | $CH_3$ | Cl | SMe |
| H | acyl | $CH_3$ | Cl | SEt |
| H | acyl | $CH_3$ | Cl | S-cyclopropyl |
| H | acyl | $CH_3$ | Cl | F |
| H | acyl | $CH_3$ | Cl | Cl |
| H | acyl | $CH_3$ | Cl | Br |
| H | acyl | $CH_3$ | Cl | I |
| H | amino acid | $CH_3$ | Cl | H |
| H | amino acid | $CH_3$ | Cl | $NH_2$ |
| H | amino acid | $CH_3$ | Cl | NH-cyclopropyl |
| H | amino acid | $CH_3$ | Cl | NH-methyl |
| H | amino acid | $CH_3$ | Cl | NH-ethyl |
| H | amino acid | $CH_3$ | Cl | NH-acetyl |
| H | amino acid | $CH_3$ | Cl | OH |
| H | amino acid | $CH_3$ | Cl | OMe |
| H | amino acid | $CH_3$ | Cl | OEt |
| H | amino acid | $CH_3$ | Cl | O-cyclopropyl |
| H | amino acid | $CH_3$ | Cl | O-acetyl |
| H | amino acid | $CH_3$ | Cl | SH |
| H | amino acid | $CH_3$ | Cl | SMe |
| H | amino acid | $CH_3$ | Cl | SEt |
| H | amino acid | $CH_3$ | Cl | S-cyclopropyl |
| H | amino acid | $CH_3$ | Cl | F |
| H | amino acid | $CH_3$ | Cl | Cl |
| H | amino acid | $CH_3$ | Cl | Br |
| H | amino acid | $CH_3$ | Cl | I |
| amino acid | amino acid | $CH_3$ | Cl | H |
| amino acid | amino acid | $CH_3$ | Cl | $NH_2$ |
| amino acid | amino acid | $CH_3$ | Cl | NH-cyclopropyl |
| amino acid | amino acid | $CH_3$ | Cl | NH-methyl |
| amino acid | amino acid | $CH_3$ | Cl | NH-ethyl |
| amino acid | amino acid | $CH_3$ | Cl | NH-acetyl |
| amino acid | amino acid | $CH_3$ | Cl | OH |
| amino acid | amino acid | $CH_3$ | Cl | OMe |
| amino acid | amino acid | $CH_3$ | Cl | OEt |
| amino acid | amino acid | $CH_3$ | Cl | O-cyclopropyl |
| amino acid | amino acid | $CH_3$ | Cl | O-acetyl |
| amino acid | amino acid | $CH_3$ | Cl | SH |
| amino acid | amino acid | $CH_3$ | Cl | SMe |
| amino acid | amino acid | $CH_3$ | Cl | SEt |
| amino acid | amino acid | $CH_3$ | Cl | S-cyclopropyl |
| amino acid | amino acid | $CH_3$ | Cl | F |
| amino acid | amino acid | $CH_3$ | Cl | Cl |
| amino acid | amino acid | $CH_3$ | Cl | Br |
| amino acid | amino acid | $CH_3$ | Cl | I |
| amino acid | H | $CH_3$ | Cl | H |
| amino acid | H | $CH_3$ | Cl | $NH_2$ |
| amino acid | H | $CH_3$ | Cl | NH-cyclopropyl |
| amino acid | H | $CH_3$ | Cl | NH-methyl |
| amino acid | H | $CH_3$ | Cl | NH-ethyl |
| amino acid | H | $CH_3$ | Cl | NH-acetyl |
| amino acid | H | $CH_3$ | Cl | OH |
| amino acid | H | $CH_3$ | Cl | OMe |
| amino acid | H | $CH_3$ | Cl | OEt |
| amino acid | H | $CH_3$ | Cl | O-cyclopropyl |
| amino acid | H | $CH_3$ | Cl | O-acetyl |
| amino acid | H | $CH_3$ | Cl | SH |
| amino acid | H | $CH_3$ | Cl | SMe |
| amino acid | H | $CH_3$ | Cl | SEt |
| amino acid | H | $CH_3$ | Cl | S-cyclopropyl |
| amino acid | H | $CH_3$ | Cl | F |
| amino acid | H | $CH_3$ | Cl | Cl |
| amino acid | H | $CH_3$ | Cl | Br |
| amino acid | H | $CH_3$ | Cl | I |
| amino acid | acyl | $CH_3$ | Cl | H |
| amino acid | acyl | $CH_3$ | Cl | $NH_2$ |
| amino acid | acyl | $CH_3$ | Cl | NH-cyclopropyl |
| amino acid | acyl | $CH_3$ | Cl | NH-methyl |
| amino acid | acyl | $CH_3$ | Cl | NH-ethyl |
| amino acid | acyl | $CH_3$ | Cl | NH-acetyl |
| amino acid | acyl | $CH_3$ | Cl | OH |
| amino acid | acyl | $CH_3$ | Cl | OMe |
| amino acid | acyl | $CH_3$ | Cl | OEt |
| amino acid | acyl | $CH_3$ | Cl | O-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | $CH_3$ | Cl | O-acetyl |
| amino acid | acyl | $CH_3$ | Cl | SH |
| amino acid | acyl | $CH_3$ | Cl | SMe |
| amino acid | acyl | $CH_3$ | Cl | SEt |
| amino acid | acyl | $CH_3$ | Cl | S-cyclopropyl |
| amino acid | acyl | $CH_3$ | Cl | F |
| amino acid | acyl | $CH_3$ | Cl | Cl |
| amino acid | acyl | $CH_3$ | Cl | Br |
| amino acid | acyl | $CH_3$ | Cl | I |
| acyl | H | $CF_3$ | Cl | H |
| acyl | H | $CF_3$ | Cl | $NH_2$ |
| acyl | H | $CF_3$ | Cl | NH-cyclopropyl |
| acyl | H | $CF_3$ | Cl | NH-methyl |
| acyl | H | $CF_3$ | Cl | NH-ethyl |
| acyl | H | $CF_3$ | Cl | NH-acetyl |
| acyl | H | $CF_3$ | Cl | OH |
| acyl | H | $CF_3$ | Cl | OMe |
| acyl | H | $CF_3$ | Cl | OEt |
| acyl | H | $CF_3$ | Cl | O-cyclopropyl |
| acyl | H | $CF_3$ | Cl | O-acetyl |
| acyl | H | $CF_3$ | Cl | SH |
| acyl | H | $CF_3$ | Cl | SMe |
| acyl | H | $CF_3$ | Cl | SEt |
| acyl | H | $CF_3$ | Cl | S-cyclopropyl |
| acyl | H | $CF_3$ | Cl | F |
| acyl | H | $CF_3$ | Cl | Cl |
| acyl | H | $CF_3$ | Cl | Br |
| acyl | H | $CF_3$ | Cl | I |
| acyl | acyl | $CF_3$ | Cl | H |
| acyl | acyl | $CF_3$ | Cl | $NH_2$ |
| acyl | acyl | $CF_3$ | Cl | NH-cyclopropyl |
| acyl | acyl | $CF_3$ | Cl | NH-methyl |
| acyl | acyl | $CF_3$ | Cl | NH-ethyl |
| acyl | acyl | $CF_3$ | Cl | NH-acetyl |
| acyl | acyl | $CF_3$ | Cl | OH |
| acyl | acyl | $CF_3$ | Cl | OMe |
| acyl | acyl | $CF_3$ | Cl | OEt |
| acyl | acyl | $CF_3$ | Cl | O-cyclopropyl |
| acyl | acyl | $CF_3$ | Cl | O-acetyl |
| acyl | acyl | $CF_3$ | Cl | SH |
| acyl | acyl | $CF_3$ | Cl | SMe |
| acyl | acyl | $CF_3$ | Cl | SEt |
| acyl | acyl | $CF_3$ | Cl | S-cyclopropyl |
| acyl | acyl | $CF_3$ | Cl | F |
| acyl | acyl | $CF_3$ | Cl | Cl |
| acyl | acyl | $CF_3$ | Cl | Br |
| acyl | acyl | $CF_3$ | Cl | I |
| acyl | amino acid | $CF_3$ | Cl | H |
| acyl | amino acid | $CF_3$ | Cl | $NH_2$ |
| acyl | amino acid | $CF_3$ | Cl | NH-cyclopropyl |
| acyl | amino acid | $CF_3$ | Cl | NH-methyl |
| acyl | amino acid | $CF_3$ | Cl | NH-ethyl |
| acyl | amino acid | $CF_3$ | Cl | NH-acetyl |
| acyl | amino acid | $CF_3$ | Cl | OH |
| acyl | amino acid | $CF_3$ | Cl | OMe |
| acyl | amino acid | $CF_3$ | Cl | OEt |
| acyl | amino acid | $CF_3$ | Cl | O-cyclopropyl |
| acyl | amino acid | $CF_3$ | Cl | O-acetyl |
| acyl | amino acid | $CF_3$ | Cl | SH |
| acyl | amino acid | $CF_3$ | Cl | SMe |
| acyl | amino acid | $CF_3$ | Cl | SEt |
| acyl | amino acid | $CF_3$ | Cl | S-cyclopropyl |
| acyl | amino acid | $CF_3$ | Cl | F |
| acyl | amino acid | $CF_3$ | Cl | Cl |
| acyl | amino acid | $CF_3$ | Cl | Br |
| acyl | amino acid | $CF_3$ | Cl | I |
| H | acyl | $CF_3$ | Cl | H |
| H | acyl | $CF_3$ | Cl | $NH_2$ |
| H | acyl | $CF_3$ | Cl | NH-cyclopropyl |
| H | acyl | $CF_3$ | Cl | NH-methyl |
| H | acyl | $CF_3$ | Cl | NH-ethyl |
| H | acyl | $CF_3$ | Cl | NH-acetyl |
| H | acyl | $CF_3$ | Cl | OH |
| H | acyl | $CF_3$ | Cl | OMe |
| H | acyl | $CF_3$ | Cl | OEt |
| H | acyl | $CF_3$ | Cl | O-cyclopropyl |
| H | acyl | $CF_3$ | Cl | O-acetyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | $CF_3$ | Cl | SH |
| H | acyl | $CF_3$ | Cl | SMe |
| H | acyl | $CF_3$ | Cl | SEt |
| H | acyl | $CF_3$ | Cl | S-cyclopropyl |
| H | acyl | $CF_3$ | Cl | F |
| H | acyl | $CF_3$ | Cl | Cl |
| H | acyl | $CF_3$ | Cl | Br |
| H | acyl | $CF_3$ | Cl | I |
| H | amino acid | $CF_3$ | Cl | H |
| H | amino acid | $CF_3$ | Cl | $NH_2$ |
| H | amino acid | $CF_3$ | Cl | NH-cyclopropyl |
| H | amino acid | $CF_3$ | Cl | NH-methyl |
| H | amino acid | $CF_3$ | Cl | NH-ethyl |
| H | amino acid | $CF_3$ | Cl | NH-acetyl |
| H | amino acid | $CF_3$ | Cl | OH |
| H | amino acid | $CF_3$ | Cl | OMe |
| H | amino acid | $CF_3$ | Cl | OEt |
| H | amino acid | $CF_3$ | Cl | O-cyclopropyl |
| H | amino acid | $CF_3$ | Cl | O-acetyl |
| H | amino acid | $CF_3$ | Cl | SH |
| H | amino acid | $CF_3$ | Cl | SMe |
| H | amino acid | $CF_3$ | Cl | SEt |
| H | amino acid | $CF_3$ | Cl | S-cyclopropyl |
| H | amino acid | $CF_3$ | Cl | F |
| H | amino acid | $CF_3$ | Cl | Cl |
| H | amino acid | $CF_3$ | Cl | Br |
| H | amino acid | $CF_3$ | Cl | I |
| amino acid | amino acid | $CF_3$ | Cl | H |
| amino acid | amino acid | $CF_3$ | Cl | $NH_2$ |
| amino acid | amino acid | $CF_3$ | Cl | NH-cyclopropyl |
| amino acid | amino acid | $CF_3$ | Cl | NH-methyl |
| amino acid | amino acid | $CF_3$ | Cl | NH-ethyl |
| amino acid | amino acid | $CF_3$ | Cl | NH-acetyl |
| amino acid | amino acid | $CF_3$ | Cl | OH |
| amino acid | amino acid | $CF_3$ | Cl | OMe |
| amino acid | amino acid | $CF_3$ | Cl | OEt |
| amino acid | amino acid | $CF_3$ | Cl | O-cyclopropyl |
| amino acid | amino acid | $CF_3$ | Cl | O-acetyl |
| amino acid | amino acid | $CF_3$ | Cl | SH |
| amino acid | amino acid | $CF_3$ | Cl | SMe |
| amino acid | amino acid | $CF_3$ | Cl | SEt |
| amino acid | amino acid | $CF_3$ | Cl | S-cyclopropyl |
| amino acid | amino acid | $CF_3$ | Cl | F |
| amino acid | amino acid | $CF_3$ | Cl | Cl |
| amino acid | amino acid | $CF_3$ | Cl | Br |
| amino acid | amino acid | $CF_3$ | Cl | I |
| amino acid | H | $CF_3$ | Cl | H |
| amino acid | H | $CF_3$ | Cl | $NH_2$ |
| amino acid | H | $CF_3$ | Cl | NH-cyclopropyl |
| amino acid | H | $CF_3$ | Cl | NH-methyl |
| amino acid | H | $CF_3$ | Cl | NH-ethyl |
| amino acid | H | $CF_3$ | Cl | NH-acetyl |
| amino acid | H | $CF_3$ | Cl | OH |
| amino acid | H | $CF_3$ | Cl | OMe |
| amino acid | H | $CF_3$ | Cl | OEt |
| amino acid | H | $CF_3$ | Cl | O-cyclopropyl |
| amino acid | H | $CF_3$ | Cl | O-acetyl |
| amino acid | H | $CF_3$ | Cl | SH |
| amino acid | H | $CF_3$ | Cl | SMe |
| amino acid | H | $CF_3$ | Cl | SEt |
| amino acid | H | $CF_3$ | Cl | S-cyclopropyl |
| amino acid | H | $CF_3$ | Cl | F |
| amino acid | H | $CF_3$ | Cl | Cl |
| amino acid | H | $CF_3$ | Cl | Br |
| amino acid | H | $CF_3$ | Cl | I |
| amino acid | acyl | $CF_3$ | Cl | H |
| amino acid | acyl | $CF_3$ | Cl | $NH_2$ |
| amino acid | acyl | $CF_3$ | Cl | NH-cyclopropyl |
| amino acid | acyl | $CF_3$ | Cl | NH-methyl |
| amino acid | acyl | $CF_3$ | Cl | NH-ethyl |
| amino acid | acyl | $CF_3$ | Cl | NH-acetyl |
| amino acid | acyl | $CF_3$ | Cl | OH |
| amino acid | acyl | $CF_3$ | Cl | OMe |
| amino acid | acyl | $CF_3$ | Cl | OEt |
| amino acid | acyl | $CF_3$ | Cl | O-cyclopropyl |
| amino acid | acyl | $CF_3$ | Cl | O-acetyl |
| amino acid | acyl | $CF_3$ | Cl | SH |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | $CF_3$ | Cl | SMe |
| amino acid | acyl | $CF_3$ | Cl | SEt |
| amino acid | acyl | $CF_3$ | Cl | S-cyclopropyl |
| amino acid | acyl | $CF_3$ | Cl | F |
| amino acid | acyl | $CF_3$ | Cl | Cl |
| amino acid | acyl | $CF_3$ | Cl | Br |
| amino acid | acyl | $CF_3$ | Cl | I |
| acyl | H | Br | Cl | H |
| acyl | H | Br | Cl | $NH_2$ |
| acyl | H | Br | Cl | NH-cyclopropyl |
| acyl | H | Br | Cl | NH-methyl |
| acyl | H | Br | Cl | NH-ethyl |
| acyl | H | Br | Cl | NH-acetyl |
| acyl | H | Br | Cl | OH |
| acyl | H | Br | Cl | OMe |
| acyl | H | Br | Cl | OEt |
| acyl | H | Br | Cl | O-cyclopropyl |
| acyl | H | Br | Cl | O-acetyl |
| acyl | H | Br | Cl | SH |
| acyl | H | Br | Cl | SMe |
| acyl | H | Br | Cl | SEt |
| acyl | H | Br | Cl | S-cyclopropyl |
| acyl | H | Br | Cl | F |
| acyl | H | Br | Cl | Cl |
| acyl | H | Br | Cl | Br |
| acyl | H | Br | Cl | I |
| acyl | acyl | Br | Cl | H |
| acyl | acyl | Br | Cl | $NH_2$ |
| acyl | acyl | Br | Cl | NH-cyclopropyl |
| acyl | acyl | Br | Cl | NH-methyl |
| acyl | acyl | Br | Cl | NH-ethyl |
| acyl | acyl | Br | Cl | NH-acetyl |
| acyl | acyl | Br | Cl | OH |
| acyl | acyl | Br | Cl | OMe |
| acyl | acyl | Br | Cl | OEt |
| acyl | acyl | Br | Cl | O-cyclopropyl |
| acyl | acyl | Br | Cl | O-acetyl |
| acyl | acyl | Br | Cl | SH |
| acyl | acyl | Br | Cl | SMe |
| acyl | acyl | Br | Cl | SEt |
| acyl | acyl | Br | Cl | S-cyclopropyl |
| acyl | acyl | Br | Cl | F |
| acyl | acyl | Br | Cl | Cl |
| acyl | acyl | Br | Cl | Br |
| acyl | acyl | Br | Cl | I |
| acyl | amino acid | Br | Cl | H |
| acyl | amino acid | Br | Cl | $NH_2$ |
| acyl | amino acid | Br | Cl | NH-cyclopropyl |
| acyl | amino acid | Br | Cl | NH-methyl |
| acyl | amino acid | Br | Cl | NH-ethyl |
| acyl | amino acid | Br | Cl | NH-acetyl |
| acyl | amino acid | Br | Cl | OH |
| acyl | amino acid | Br | Cl | OMe |
| acyl | amino acid | Br | Cl | OEt |
| acyl | amino acid | Br | Cl | O-cyclopropyl |
| acyl | amino acid | Br | Cl | O-acetyl |
| acyl | amino acid | Br | Cl | SH |
| acyl | amino acid | Br | Cl | SMe |
| acyl | amino acid | Br | Cl | SEt |
| acyl | amino acid | Br | Cl | S-cyclopropyl |
| acyl | amino acid | Br | Cl | F |
| acyl | amino acid | Br | Cl | Cl |
| acyl | amino acid | Br | Cl | Br |
| acyl | amino acid | Br | Cl | I |
| H | acyl | Br | Cl | H |
| H | acyl | Br | Cl | $NH_2$ |
| H | acyl | Br | Cl | NH-cyclopropyl |
| H | acyl | Br | Cl | NH-methyl |
| H | acyl | Br | Cl | NH-ethyl |
| H | acyl | Br | Cl | NH-acetyl |
| H | acyl | Br | Cl | OH |
| H | acyl | Br | Cl | OMe |
| H | acyl | Br | Cl | OEt |
| H | acyl | Br | Cl | O-cyclopropyl |
| H | acyl | Br | Cl | O-acetyl |
| H | acyl | Br | Cl | SH |
| H | acyl | Br | Cl | SMe |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | Br | Cl | SEt |
| H | acyl | Br | Cl | S-cyclopropyl |
| H | acyl | Br | Cl | F |
| H | acyl | Br | Cl | Cl |
| H | acyl | Br | Cl | Br |
| H | acyl | Br | Cl | I |
| H | amino acid | Br | Cl | H |
| H | amino acid | Br | Cl | $NH_2$ |
| H | amino acid | Br | Cl | NH-cyclopropyl |
| H | amino acid | Br | Cl | NH-methyl |
| H | amino acid | Br | Cl | NH-ethyl |
| H | amino acid | Br | Cl | NH-acetyl |
| H | amino acid | Br | Cl | OH |
| H | amino acid | Br | Cl | OMe |
| H | amino acid | Br | Cl | OEt |
| H | amino acid | Br | Cl | O-cyclopropyl |
| H | amino acid | Br | Cl | O-acetyl |
| H | amino acid | Br | Cl | SH |
| H | amino acid | Br | Cl | SMe |
| H | amino acid | Br | Cl | SEt |
| H | amino acid | Br | Cl | S-cyclopropyl |
| H | amino acid | Br | Cl | F |
| H | amino acid | Br | Cl | Cl |
| H | amino acid | Br | Cl | Br |
| H | amino acid | Br | Cl | I |
| amino acid | amino acid | Br | Cl | H |
| amino acid | amino acid | Br | Cl | $NH_2$ |
| amino acid | amino acid | Br | Cl | NH-cyclopropyl |
| amino acid | amino acid | Br | Cl | NH-methyl |
| amino acid | amino acid | Br | Cl | NH-ethyl |
| amino acid | amino acid | Br | Cl | NH-acetyl |
| amino acid | amino acid | Br | Cl | OH |
| amino acid | amino acid | Br | Cl | OMe |
| amino acid | amino acid | Br | Cl | OEt |
| amino acid | amino acid | Br | Cl | O-cyclopropyl |
| amino acid | amino acid | Br | Cl | O-acetyl |
| amino acid | amino acid | Br | Cl | SH |
| amino acid | amino acid | Br | Cl | SMe |
| amino acid | amino acid | Br | Cl | SEt |
| amino acid | amino acid | Br | Cl | S-cyclopropyl |
| amino acid | amino acid | Br | Cl | F |
| amino acid | amino acid | Br | Cl | Cl |
| amino acid | amino acid | Br | Cl | Br |
| amino acid | amino acid | Br | Cl | I |
| amino acid | H | Br | Cl | H |
| amino acid | H | Br | Cl | $NH_2$ |
| amino acid | H | Br | Cl | NH-cyclopropyl |
| amino acid | H | Br | Cl | NH-methyl |
| amino acid | H | Br | Cl | NH-ethyl |
| amino acid | H | Br | Cl | NH-acetyl |
| amino acid | H | Br | Cl | OH |
| amino acid | H | Br | Cl | OMe |
| amino acid | H | Br | Cl | OEt |
| amino acid | H | Br | Cl | O-cyclopropyl |
| amino acid | H | Br | Cl | O-acetyl |
| amino acid | H | Br | Cl | SH |
| amino acid | H | Br | Cl | SMe |
| amino acid | H | Br | Cl | SEt |
| amino acid | H | Br | Cl | S-cyclopropyl |
| amino acid | H | Br | Cl | F |
| amino acid | H | Br | Cl | Cl |
| amino acid | H | Br | Cl | Br |
| amino acid | H | Br | Cl | I |
| amino acid | acyl | Br | Cl | H |
| amino acid | acyl | Br | Cl | $NH_2$ |
| amino acid | acyl | Br | Cl | NH-cyclopropyl |
| amino acid | acyl | Br | Cl | NH-methyl |
| amino acid | acyl | Br | Cl | NH-ethyl |
| amino acid | acyl | Br | Cl | NH-acetyl |
| amino acid | acyl | Br | Cl | OH |
| amino acid | acyl | Br | Cl | OMe |
| amino acid | acyl | Br | Cl | OEt |
| amino acid | acyl | Br | Cl | O-cyclopropyl |
| amino acid | acyl | Br | Cl | O-acetyl |
| amino acid | acyl | Br | Cl | SH |
| amino acid | acyl | Br | Cl | SMe |
| amino acid | acyl | Br | Cl | SEt |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | Br | Cl | S-cyclopropyl |
| amino acid | acyl | Br | Cl | F |
| amino acid | acyl | Br | Cl | Cl |
| amino acid | acyl | Br | Cl | Br |
| amino acid | acyl | Br | Cl | I |
| acyl | H | Cl | Cl | H |
| acyl | H | Cl | Cl | $NH_2$ |
| acyl | H | Cl | Cl | NH-cyclopropyl |
| acyl | H | Cl | Cl | NH-methyl |
| acyl | H | Cl | Cl | NH-ethyl |
| acyl | H | Cl | Cl | NH-acetyl |
| acyl | H | Cl | Cl | OH |
| acyl | H | Cl | Cl | OMe |
| acyl | H | Cl | Cl | OEt |
| acyl | H | Cl | Cl | O-cyclopropyl |
| acyl | H | Cl | Cl | O-acetyl |
| acyl | H | Cl | Cl | SH |
| acyl | H | Cl | Cl | SMe |
| acyl | H | Cl | Cl | SEt |
| acyl | H | Cl | Cl | S-cyclopropyl |
| acyl | H | Cl | Cl | F |
| acyl | H | Cl | Cl | Cl |
| acyl | H | Cl | Cl | Br |
| acyl | H | Cl | Cl | I |
| acyl | acyl | Cl | Cl | H |
| acyl | acyl | Cl | Cl | $NH_2$ |
| acyl | acyl | Cl | Cl | NH-cyclopropyl |
| acyl | acyl | Cl | Cl | NH-methyl |
| acyl | acyl | Cl | Cl | NH-ethyl |
| acyl | acyl | Cl | Cl | NH-acetyl |
| acyl | acyl | Cl | Cl | OH |
| acyl | acyl | Cl | Cl | OMe |
| acyl | acyl | Cl | Cl | OEt |
| acyl | acyl | Cl | Cl | O-cyclopropyl |
| acyl | acyl | Cl | Cl | O-acetyl |
| acyl | acyl | Cl | Cl | SH |
| acyl | acyl | Cl | Cl | SMe |
| acyl | acyl | Cl | Cl | SEt |
| acyl | acyl | Cl | Cl | S-cyclopropyl |
| acyl | acyl | Cl | Cl | F |
| acyl | acyl | Cl | Cl | Cl |
| acyl | acyl | Cl | Cl | Br |
| acyl | acyl | Cl | Cl | I |
| acyl | amino acid | Cl | Cl | H |
| acyl | amino acid | Cl | Cl | $NH_2$ |
| acyl | amino acid | Cl | Cl | NH-cyclopropyl |
| acyl | amino acid | Cl | Cl | NH-methyl |
| acyl | amino acid | Cl | Cl | NH-ethyl |
| acyl | amino acid | Cl | Cl | NH-acetyl |
| acyl | amino acid | Cl | Cl | OH |
| acyl | amino acid | Cl | Cl | OMe |
| acyl | amino acid | Cl | Cl | OEt |
| acyl | amino acid | Cl | Cl | O-cyclopropyl |
| acyl | amino acid | Cl | Cl | O-acetyl |
| acyl | amino acid | Cl | Cl | SH |
| acyl | amino acid | Cl | Cl | SMe |
| acyl | amino acid | Cl | Cl | SEt |
| acyl | amino acid | Cl | Cl | S-cyclopropyl |
| acyl | amino acid | Cl | Cl | F |
| acyl | amino acid | Cl | Cl | Cl |
| acyl | amino acid | Cl | Cl | Br |
| acyl | amino acid | Cl | Cl | I |
| H | acyl | Cl | Cl | H |
| H | acyl | Cl | Cl | $NH_2$ |
| H | acyl | Cl | Cl | NH-cyclopropyl |
| H | acyl | Cl | Cl | NH-methyl |
| H | acyl | Cl | Cl | NH-ethyl |
| H | acyl | Cl | Cl | NH-acetyl |
| H | acyl | Cl | Cl | OH |
| H | acyl | Cl | Cl | OMe |
| H | acyl | Cl | Cl | OEt |
| H | acyl | Cl | Cl | O-cyclopropyl |
| H | acyl | Cl | Cl | O-acetyl |
| H | acyl | Cl | Cl | SH |
| H | acyl | Cl | Cl | SMe |
| H | acyl | Cl | Cl | SEt |
| H | acyl | Cl | Cl | S-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | Cl | Cl | F |
| H | acyl | Cl | Cl | Cl |
| H | acyl | Cl | Cl | Br |
| H | acyl | Cl | Cl | I |
| H | amino acid | Cl | Cl | H |
| H | amino acid | Cl | Cl | $NH_2$ |
| H | amino acid | Cl | Cl | NH-cyclopropyl |
| H | amino acid | Cl | Cl | NH-methyl |
| H | amino acid | Cl | Cl | NH-ethyl |
| H | amino acid | Cl | Cl | NH-acetyl |
| H | amino acid | Cl | Cl | OH |
| H | amino acid | Cl | Cl | OMe |
| H | amino acid | Cl | Cl | OEt |
| H | amino acid | Cl | Cl | O-cyclopropyl |
| H | amino acid | Cl | Cl | O-acetyl |
| H | amino acid | Cl | Cl | SH |
| H | amino acid | Cl | Cl | SMe |
| H | amino acid | Cl | Cl | SEt |
| H | amino acid | Cl | Cl | S-cyclopropyl |
| H | amino acid | Cl | Cl | F |
| H | amino acid | Cl | Cl | Cl |
| H | amino acid | Cl | Cl | Br |
| H | amino acid | Cl | Cl | I |
| amino acid | amino acid | Cl | Cl | H |
| amino acid | amino acid | Cl | Cl | $NH_2$ |
| amino acid | amino acid | Cl | Cl | NH-cyclopropyl |
| amino acid | amino acid | Cl | Cl | NH-methyl |
| amino acid | amino acid | Cl | Cl | NH-ethyl |
| amino acid | amino acid | Cl | Cl | NH-acetyl |
| amino acid | amino acid | Cl | Cl | OH |
| amino acid | amino acid | Cl | Cl | OMe |
| amino acid | amino acid | Cl | Cl | OEt |
| amino acid | amino acid | Cl | Cl | O-cyclopropyl |
| amino acid | amino acid | Cl | Cl | O-acetyl |
| amino acid | amino acid | Cl | Cl | SH |
| amino acid | amino acid | Cl | Cl | SMe |
| amino acid | amino acid | Cl | Cl | SEt |
| amino acid | amino acid | Cl | Cl | S-cyclopropyl |
| amino acid | amino acid | Cl | Cl | F |
| amino acid | amino acid | Cl | Cl | Cl |
| amino acid | amino acid | Cl | Cl | Br |
| amino acid | amino acid | Cl | Cl | I |
| amino acid | H | Cl | Cl | H |
| amino acid | H | Cl | Cl | $NH_2$ |
| amino acid | H | Cl | Cl | NH-cyclopropyl |
| amino acid | H | Cl | Cl | NH-methyl |
| amino acid | H | Cl | Cl | NH-ethyl |
| amino acid | H | Cl | Cl | NH-acetyl |
| amino acid | H | Cl | Cl | OH |
| amino acid | H | Cl | Cl | OMe |
| amino acid | H | Cl | Cl | OEt |
| amino acid | H | Cl | Cl | O-cyclopropyl |
| amino acid | H | Cl | Cl | O-acetyl |
| amino acid | H | Cl | Cl | SH |
| amino acid | H | Cl | Cl | SMe |
| amino acid | H | Cl | Cl | SEt |
| amino acid | H | Cl | Cl | S-cyclopropyl |
| amino acid | H | Cl | Cl | F |
| amino acid | H | Cl | Cl | Cl |
| amino acid | H | Cl | Cl | Br |
| amino acid | H | Cl | Cl | I |
| amino acid | acyl | Cl | Cl | H |
| amino acid | acyl | Cl | Cl | $NH_2$ |
| amino acid | acyl | Cl | Cl | NH-cyclopropyl |
| amino acid | acyl | Cl | Cl | NH-methyl |
| amino acid | acyl | Cl | Cl | NH-ethyl |
| amino acid | acyl | Cl | Cl | NH-acetyl |
| amino acid | acyl | Cl | Cl | OH |
| amino acid | acyl | Cl | Cl | OMe |
| amino acid | acyl | Cl | Cl | OEt |
| amino acid | acyl | Cl | Cl | O-cyclopropyl |
| amino acid | acyl | Cl | Cl | O-acetyl |
| amino acid | acyl | Cl | Cl | SH |
| amino acid | acyl | Cl | Cl | SMe |
| amino acid | acyl | Cl | Cl | SEt |
| amino acid | acyl | Cl | Cl | S-cyclopropyl |
| amino acid | acyl | Cl | Cl | F |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | Cl | Cl | Cl |
| amino acid | acyl | Cl | Cl | Br |
| amino acid | acyl | Cl | Cl | I |
| acyl | H | F | Cl | H |
| acyl | H | F | Cl | $NH_2$ |
| acyl | H | F | Cl | NH-cyclopropyl |
| acyl | H | F | Cl | NH-methyl |
| acyl | H | F | Cl | NH-ethyl |
| acyl | H | F | Cl | NH-acetyl |
| acyl | H | F | Cl | OH |
| acyl | H | F | Cl | OMe |
| acyl | H | F | Cl | OEt |
| acyl | H | F | Cl | O-cyclopropyl |
| acyl | H | F | Cl | O-acetyl |
| acyl | H | F | Cl | SH |
| acyl | H | F | Cl | SMe |
| acyl | H | F | Cl | SEt |
| acyl | H | F | Cl | S-cyclopropyl |
| acyl | H | F | Cl | F |
| acyl | H | F | Cl | Cl |
| acyl | H | F | Cl | Br |
| acyl | H | F | Cl | I |
| acyl | acyl | F | Cl | H |
| acyl | acyl | F | Cl | $NH_2$ |
| acyl | acyl | F | Cl | NH-cyclopropyl |
| acyl | acyl | F | Cl | NH-methyl |
| acyl | acyl | F | Cl | NH-ethyl |
| acyl | acyl | F | Cl | NH-acetyl |
| acyl | acyl | F | Cl | OH |
| acyl | acyl | F | Cl | OMe |
| acyl | acyl | F | Cl | OEt |
| acyl | acyl | F | Cl | O-cyclopropyl |
| acyl | acyl | F | Cl | O-acetyl |
| acyl | acyl | F | Cl | SH |
| acyl | acyl | F | Cl | SMe |
| acyl | acyl | F | Cl | SEt |
| acyl | acyl | F | Cl | S-cyclopropyl |
| acyl | acyl | F | Cl | F |
| acyl | acyl | F | Cl | Cl |
| acyl | acyl | F | Cl | Br |
| acyl | acyl | F | Cl | I |
| acyl | amino acid | F | Cl | H |
| acyl | amino acid | F | Cl | $NH_2$ |
| acyl | amino acid | F | Cl | NH-cyclopropyl |
| acyl | amino acid | F | Cl | NH-methyl |
| acyl | amino acid | F | Cl | NH-ethyl |
| acyl | amino acid | F | Cl | NH-acetyl |
| acyl | amino acid | F | Cl | OH |
| acyl | amino acid | F | Cl | OMe |
| acyl | amino acid | F | Cl | OEt |
| acyl | amino acid | F | Cl | O-cyclopropyl |
| acyl | amino acid | F | Cl | O-acetyl |
| acyl | amino acid | F | Cl | SH |
| acyl | amino acid | F | Cl | SMe |
| acyl | amino acid | F | Cl | SEt |
| acyl | amino acid | F | Cl | S-cyclopropyl |
| acyl | amino acid | F | Cl | F |
| acyl | amino acid | F | Cl | Cl |
| acyl | amino acid | F | Cl | Br |
| acyl | amino acid | F | Cl | I |
| H | acyl | F | Cl | H |
| H | acyl | F | Cl | $NH_2$ |
| H | acyl | F | Cl | NH-cyclopropyl |
| H | acyl | F | Cl | NH-methyl |
| H | acyl | F | Cl | NH-ethyl |
| H | acyl | F | Cl | NH-acetyl |
| H | acyl | F | Cl | OH |
| H | acyl | F | Cl | OMe |
| H | acyl | F | Cl | OEt |
| H | acyl | F | Cl | O-cyclopropyl |
| H | acyl | F | Cl | O-acetyl |
| H | acyl | F | Cl | SH |
| H | acyl | F | Cl | SMe |
| H | acyl | F | Cl | SEt |
| H | acyl | F | Cl | S-cyclopropyl |
| H | acyl | F | Cl | F |
| H | acyl | F | Cl | Cl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | F | Cl | Br |
| H | acyl | F | Cl | I |
| H | amino acid | F | Cl | H |
| H | amino acid | F | Cl | $NH_2$ |
| H | amino acid | F | Cl | NH-cyclopropyl |
| H | amino acid | F | Cl | NH-methyl |
| H | amino acid | F | Cl | NH-ethyl |
| H | amino acid | F | I | NH-acetyl |
| H | amino acid | F | Cl | OH |
| H | amino acid | F | Cl | OMe |
| H | amino acid | F | Cl | OEt |
| H | amino acid | F | Cl | O-cyclopropyl |
| H | amino acid | F | Cl | O-acetyl |
| H | amino acid | F | Cl | SH |
| H | amino acid | F | Cl | SMe |
| H | amino acid | F | Cl | SEt |
| H | amino acid | F | Cl | S-cyclopropyl |
| H | amino acid | F | Cl | F |
| H | amino acid | F | Cl | Cl |
| H | amino acid | F | Cl | Br |
| H | amino acid | F | Cl | I |
| amino acid | amino acid | F | Cl | H |
| amino acid | amino acid | F | Cl | $NH_2$ |
| amino acid | amino acid | F | Cl | NH-cyclopropyl |
| amino acid | amino acid | F | Cl | NH-methyl |
| amino acid | amino acid | F | Cl | NH-ethyl |
| amino acid | amino acid | F | Cl | NH-acetyl |
| amino acid | amino acid | F | Cl | OH |
| amino acid | amino acid | F | Cl | OMe |
| amino acid | amino acid | F | Cl | OEt |
| amino acid | amino acid | F | Cl | O-cyclopropyl |
| amino acid | amino acid | F | Cl | O-acetyl |
| amino acid | amino acid | F | Cl | SH |
| amino acid | amino acid | F | Cl | SMe |
| amino acid | amino acid | F | Cl | SEt |
| amino acid | amino acid | F | Cl | S-cyclopropyl |
| amino acid | amino acid | F | Cl | F |
| amino acid | amino acid | F | Cl | Cl |
| amino acid | amino acid | F | Cl | Br |
| amino acid | amino acid | F | Cl | I |
| amino acid | H | F | Cl | H |
| amino acid | H | F | Cl | $NH_2$ |
| amino acid | H | F | Cl | NH-cyclopropyl |
| amino acid | H | F | Cl | NH-methyl |
| amino acid | H | F | Cl | NH-ethyl |
| amino acid | H | F | Cl | NH-acetyl |
| amino acid | H | F | Cl | OH |
| amino acid | H | F | Cl | OMe |
| amino acid | H | F | Cl | OEt |
| amino acid | H | F | Cl | O-cyclopropyl |
| amino acid | H | F | Cl | O-acetyl |
| amino acid | H | F | Cl | SH |
| amino acid | H | F | Cl | SMe |
| amino acid | H | F | Cl | SEt |
| amino acid | H | F | Cl | S-cyclopropyl |
| amino acid | H | F | Cl | F |
| amino acid | H | F | Cl | Cl |
| amino acid | H | F | Cl | Br |
| amino acid | H | F | Cl | I |
| amino acid | acyl | F | Cl | H |
| amino acid | acyl | F | Cl | $NH_2$ |
| amino acid | acyl | F | Cl | NH-cyclopropyl |
| amino acid | acyl | F | Cl | NH-methyl |
| amino acid | acyl | F | Cl | NH-ethyl |
| amino acid | acyl | F | Cl | NH-acetyl |
| amino acid | acyl | F | Cl | OH |
| amino acid | acyl | F | Cl | OMe |
| amino acid | acyl | F | Cl | OEt |
| amino acid | acyl | F | Cl | O-cyclopropyl |
| amino acid | acyl | F | Cl | O-acetyl |
| amino acid | acyl | F | Cl | SH |
| amino acid | acyl | F | Cl | SMe |
| amino acid | acyl | F | Cl | SEt |
| amino acid | acyl | F | Cl | S-cyclopropyl |
| amino acid | acyl | F | Cl | F |
| amino acid | acyl | F | Cl | Cl |
| amino acid | acyl | F | Cl | Br |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | F | Cl | I |
| acyl | H | $NH_2$ | Cl | H |
| acyl | H | $NH_2$ | Cl | $NH_2$ |
| acyl | H | $NH_2$ | Cl | NH-cyclopropyl |
| acyl | H | $NH_2$ | Cl | NH-methyl |
| acyl | H | $NH_2$ | Cl | NH-ethyl |
| acyl | H | $NH_2$ | Cl | NH-acetyl |
| acyl | H | $NH_2$ | Cl | OH |
| acyl | H | $NH_2$ | Cl | OMe |
| acyl | H | $NH_2$ | Cl | OEt |
| acyl | H | $NH_2$ | Cl | O-cyclopropyl |
| acyl | H | $NH_2$ | Cl | O-acetyl |
| acyl | H | $NH_2$ | Cl | SH |
| acyl | H | $NH_2$ | Cl | SMe |
| acyl | H | $NH_2$ | Cl | SEt |
| acyl | H | $NH_2$ | Cl | S-cyclopropyl |
| acyl | H | $NH_2$ | Cl | F |
| acyl | H | $NH_2$ | Cl | Cl |
| acyl | H | $NH_2$ | Cl | Br |
| acyl | H | $NH_2$ | Cl | I |
| acyl | acyl | $NH_2$ | Cl | H |
| acyl | acyl | $NH_2$ | Cl | $NH_2$ |
| acyl | acyl | $NH_2$ | Cl | NH-cyclopropyl |
| acyl | acyl | $NH_2$ | Cl | NH-methyl |
| acyl | acyl | $NH_2$ | Cl | NH-ethyl |
| acyl | acyl | $NH_2$ | Cl | NH-acetyl |
| acyl | acyl | $NH_2$ | Cl | OH |
| acyl | acyl | $NH_2$ | Cl | OMe |
| acyl | acyl | $NH_2$ | Cl | OEt |
| acyl | acyl | $NH_2$ | Cl | O-cyclopropyl |
| acyl | acyl | $NH_2$ | Cl | O-acetyl |
| acyl | acyl | $NH_2$ | Cl | SH |
| acyl | acyl | $NH_2$ | Cl | SMe |
| acyl | acyl | $NH_2$ | Cl | SEt |
| acyl | acyl | $NH_2$ | Cl | S-cyclopropyl |
| acyl | acyl | $NH_2$ | Cl | F |
| acyl | acyl | $NH_2$ | Cl | Cl |
| acyl | acyl | $NH_2$ | Cl | Br |
| acyl | acyl | $NH_2$ | Cl | I |
| acyl | amino acid | $NH_2$ | Cl | H |
| acyl | amino acid | $NH_2$ | Cl | $NH_2$ |
| acyl | amino acid | $NH_2$ | Cl | NH-cyclopropyl |
| acyl | amino acid | $NH_2$ | Cl | NH-methyl |
| acyl | amino acid | $NH_2$ | Cl | NH-ethyl |
| acyl | amino acid | $NH_2$ | Cl | NH-acetyl |
| acyl | amino acid | $NH_2$ | Cl | OH |
| acyl | amino acid | $NH_2$ | Cl | OMe |
| acyl | amino acid | $NH_2$ | Cl | OEt |
| acyl | amino acid | $NH_2$ | Cl | O-cyclopropyl |
| acyl | amino acid | $NH_2$ | Cl | O-acetyl |
| acyl | amino acid | $NH_2$ | Cl | SH |
| acyl | amino acid | $NH_2$ | Cl | SMe |
| acyl | amino acid | $NH_2$ | Cl | SEt |
| acyl | amino acid | $NH_2$ | Cl | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | Cl | F |
| acyl | amino acid | $NH_2$ | Cl | Cl |
| acyl | amino acid | $NH_2$ | Cl | Br |
| acyl | amino acid | $NH_2$ | Cl | I |
| H | acyl | $NH_2$ | Cl | H |
| H | acyl | $NH_2$ | Cl | $NH_2$ |
| H | acyl | $NH_2$ | Cl | NH-cyclopropyl |
| H | acyl | $NH_2$ | Cl | NH-methyl |
| H | acyl | $NH_2$ | Cl | NH-ethyl |
| H | acyl | $NH_2$ | Cl | NH-acetyl |
| H | acyl | $NH_2$ | Cl | OH |
| H | acyl | $NH_2$ | Cl | OMe |
| H | acyl | $NH_2$ | Cl | OEt |
| H | acyl | $NH_2$ | Cl | O-cyclopropyl |
| H | acyl | $NH_2$ | Cl | O-acetyl |
| H | acyl | $NH_2$ | Cl | SH |
| H | acyl | $NH_2$ | Cl | SMe |
| H | acyl | $NH_2$ | Cl | SEt |
| H | acyl | $NH_2$ | Cl | S-cyclopropyl |
| H | acyl | $NH_2$ | Cl | F |
| H | acyl | $NH_2$ | Cl | Cl |
| H | acyl | $NH_2$ | Cl | Br |
| H | acyl | $NH_2$ | Cl | I |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | $NH_2$ | Cl | H |
| H | amino acid | $NH_2$ | Cl | $NH_2$ |
| H | amino acid | $NH_2$ | Cl | NH-cyclopropyl |
| H | amino acid | $NH_2$ | Cl | NH-methyl |
| H | amino acid | $NH_2$ | Cl | NH-ethyl |
| H | amino acid | $NH_2$ | Cl | NH-acetyl |
| H | amino acid | $NH_2$ | Cl | OH |
| H | amino acid | $NH_2$ | Cl | OMe |
| H | amino acid | $NH_2$ | Cl | OEt |
| H | amino acid | $NH_2$ | Cl | O-cyclopropyl |
| H | amino acid | $NH_2$ | Cl | O-acetyl |
| H | amino acid | $NH_2$ | Cl | SH |
| H | amino acid | $NH_2$ | Cl | SMe |
| H | amino acid | $NH_2$ | Cl | SEt |
| H | amino acid | $NH_2$ | Cl | S-cyclopropyl |
| H | amino acid | $NH_2$ | Cl | F |
| H | amino acid | $NH_2$ | Cl | Cl |
| H | amino acid | $NH_2$ | Cl | Br |
| H | amino acid | $NH_2$ | Cl | I |
| amino acid | amino acid | $NH_2$ | Cl | H |
| amino acid | amino acid | $NH_2$ | Cl | $NH_2$ |
| amino acid | amino acid | $NH_2$ | Cl | NH-cyclopropyl |
| amino acid | amino acid | $NH_2$ | Cl | NH-methyl |
| amino acid | amino acid | $NH_2$ | Cl | NH-ethyl |
| amino acid | amino acid | $NH_2$ | Cl | NH-acetyl |
| amino acid | amino acid | $NH_2$ | Cl | OH |
| amino acid | amino acid | $NH_2$ | Cl | OMe |
| amino acid | amino acid | $NH_2$ | Cl | OEt |
| amino acid | amino acid | $NH_2$ | Cl | O-cyclopropyl |
| amino acid | amino acid | $NH_2$ | Cl | O-acetyl |
| amino acid | amino acid | $NH_2$ | Cl | SH |
| amino acid | amino acid | $NH_2$ | Cl | SMe |
| amino acid | amino acid | $NH_2$ | Cl | SEt |
| amino acid | amino acid | $NH_2$ | Cl | S-cyclopropyl |
| amino acid | amino acid | $NH_2$ | Cl | F |
| amino acid | amino acid | $NH_2$ | Cl | Cl |
| amino acid | amino acid | $NH_2$ | Cl | Br |
| amino acid | amino acid | $NH_2$ | Cl | I |
| amino acid | H | $NH_2$ | Cl | H |
| amino acid | H | $NH_2$ | Cl | $NH_2$ |
| amino acid | H | $NH_2$ | Cl | NH-cyclopropyl |
| amino acid | H | $NH_2$ | Cl | NH-methyl |
| amino acid | H | $NH_2$ | Cl | NH-ethyl |
| amino acid | H | $NH_2$ | Cl | NH-acetyl |
| amino acid | H | $NH_2$ | Cl | OH |
| amino acid | H | $NH_2$ | Cl | OMe |
| amino acid | H | $NH_2$ | Cl | OEt |
| amino acid | H | $NH_2$ | Cl | O-cyclopropyl |
| amino acid | H | $NH_2$ | Cl | O-acetyl |
| amino acid | H | $NH_2$ | Cl | SH |
| amino acid | H | $NH_2$ | Cl | SMe |
| amino acid | H | $NH_2$ | Cl | SEt |
| amino acid | H | $NH_2$ | Cl | S-cyclopropyl |
| amino acid | H | $NH_2$ | Cl | F |
| amino acid | H | $NH_2$ | Cl | Cl |
| amino acid | H | $NH_2$ | Cl | Br |
| amino acid | H | $NH_2$ | Cl | I |
| amino acid | acyl | $NH_2$ | Cl | H |
| amino acid | acyl | $NH_2$ | Cl | $NH_2$ |
| amino acid | acyl | $NH_2$ | Cl | NH-cyclopropyl |
| amino acid | acyl | $NH_2$ | Cl | NH-methyl |
| amino acid | acyl | $NH_2$ | Cl | NH-ethyl |
| amino acid | acyl | $NH_2$ | Cl | NH-acetyl |
| amino acid | acyl | $NH_2$ | Cl | OH |
| amino acid | acyl | $NH_2$ | Cl | OMe |
| amino acid | acyl | $NH_2$ | Cl | OEt |
| amino acid | acyl | $NH_2$ | Cl | O-cyclopropyl |
| amino acid | acyl | $NH_2$ | Cl | O-acetyl |
| amino acid | acyl | $NH_2$ | Cl | SH |
| amino acid | acyl | $NH_2$ | Cl | SMe |
| amino acid | acyl | $NH_2$ | Cl | SEt |
| amino acid | acyl | $NH_2$ | Cl | S-cyclopropyl |
| amino acid | acyl | $NH_2$ | Cl | F |
| amino acid | acyl | $NH_2$ | Cl | Cl |
| amino acid | acyl | $NH_2$ | Cl | Br |
| amino acid | acyl | $NH_2$ | Cl | I |
| acyl | H | SH | Cl | H |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | SH | Cl | $NH_2$ |
| acyl | H | SH | Cl | NH-cyclopropyl |
| acyl | H | SH | Cl | NH-methyl |
| acyl | H | SH | Cl | NH-ethyl |
| acyl | H | SH | Cl | NH-acetyl |
| acyl | H | SH | Cl | OH |
| acyl | H | SH | Cl | OMe |
| acyl | H | SH | Cl | OEt |
| acyl | H | SH | Cl | O-cyclopropyl |
| acyl | H | SH | Cl | O-acetyl |
| acyl | H | SH | Cl | SH |
| acyl | H | SH | Cl | SMe |
| acyl | H | SH | Cl | SEt |
| acyl | H | SH | Cl | S-cyclopropyl |
| acyl | H | SH | Cl | F |
| acyl | H | SH | Cl | Cl |
| acyl | H | SH | Cl | Br |
| acyl | H | SH | Cl | I |
| acyl | acyl | SH | Cl | H |
| acyl | acyl | SH | Cl | $NH_2$ |
| acyl | acyl | SH | Cl | NH-cyclopropyl |
| acyl | acyl | SH | Cl | NH-methyl |
| acyl | acyl | SH | Cl | NH-ethyl |
| acyl | acyl | SH | Cl | NH-acetyl |
| acyl | acyl | SH | Cl | OH |
| acyl | acyl | SH | Cl | OMe |
| acyl | acyl | SH | Cl | OEt |
| acyl | acyl | SH | Cl | O-cyclopropyl |
| acyl | acyl | SH | Cl | O-acetyl |
| acyl | acyl | SH | Cl | SH |
| acyl | acyl | SH | Cl | SMe |
| acyl | acyl | SH | Cl | SEt |
| acyl | acyl | SH | Cl | S-cyclopropyl |
| acyl | acyl | SH | Cl | F |
| acyl | acyl | SH | Cl | Cl |
| acyl | acyl | SH | Cl | Br |
| acyl | acyl | SH | Cl | I |
| acyl | amino acid | SH | Cl | H |
| acyl | amino acid | SH | Cl | $NH_2$ |
| acyl | amino acid | SH | Cl | NH-cyclopropyl |
| acyl | amino acid | SH | Cl | NH-methyl |
| acyl | amino acid | SH | Cl | NH-ethyl |
| acyl | amino acid | SH | Cl | NH-acetyl |
| acyl | amino acid | SH | Cl | OH |
| acyl | amino acid | SH | Cl | OMe |
| acyl | amino acid | SH | Cl | OEt |
| acyl | amino acid | SH | Cl | O-cyclopropyl |
| acyl | amino acid | SH | Cl | O-acetyl |
| acyl | amino acid | SH | Cl | SH |
| acyl | amino acid | SH | Cl | SMe |
| acyl | amino acid | SH | Cl | SEt |
| acyl | amino acid | SH | Cl | S-cyclopropyl |
| acyl | amino acid | SH | Cl | F |
| acyl | amino acid | SH | Cl | Cl |
| acyl | amino acid | SH | Cl | Br |
| acyl | amino acid | SH | Cl | I |
| H | acyl | SH | Cl | H |
| H | acyl | SH | Cl | $NH_2$ |
| H | acyl | SH | Cl | NH-cyclopropyl |
| H | acyl | SH | Cl | NH-methyl |
| H | acyl | SH | Cl | NH-ethyl |
| H | acyl | sn | Cl | NH-acetyl |
| H | acyl | SH | Cl | OH |
| H | acyl | SH | Cl | OMe |
| H | acyl | SH | Cl | OEt |
| H | acyl | SH | Cl | O-cyclopropyl |
| H | acyl | SH | Cl | O-acetyl |
| H | acyl | SH | Cl | SH |
| H | acyl | SH | Cl | SMe |
| H | acyl | SH | Cl | SEt |
| H | acyl | SH | Cl | S-cyclopropyl |
| H | acyl | SH | Cl | F |
| H | acyl | SH | Cl | Cl |
| H | acyl | SH | Cl | Br |
| H | acyl | SH | Cl | I |
| H | amino acid | SH | Cl | H |
| H | amino acid | SH | Cl | $NH_2$ |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | SH | Cl | NH-cyclopropyl |
| H | amino acid | SH | Cl | NH-methyl |
| H | amino acid | SH | Cl | NH-ethyl |
| H | amino acid | SH | Cl | NH-acetyl |
| H | amino acid | SH | Cl | OH |
| H | amino acid | SH | Cl | OMe |
| H | amino acid | SH | Cl | OEt |
| H | amino acid | SH | Cl | O-cyclopropyl |
| H | amino acid | SH | Cl | O-acetyl |
| H | amino acid | SH | Cl | SH |
| H | amino acid | SH | Cl | SMe |
| H | amino acid | SH | Cl | SEt |
| H | amino acid | SH | Cl | S-cyclopropyl |
| H | amino acid | SH | Cl | F |
| H | amino acid | SH | Cl | Cl |
| H | amino acid | SH | Cl | Br |
| H | amino acid | SH | Cl | I |
| amino acid | amino acid | SH | Cl | H |
| amino acid | amino acid | SH | Cl | $NH_2$ |
| amino acid | amino acid | SH | Cl | NH-cyclopropyl |
| amino acid | amino acid | SH | Cl | NH-methyl |
| amino acid | amino acid | SH | Cl | NH-ethyl |
| amino acid | amino acid | SH | Cl | NH-acetyl |
| amino acid | amino acid | SH | Cl | OH |
| amino acid | amino acid | SH | Cl | OMe |
| amino acid | amino acid | SH | Cl | OEt |
| amino acid | amino acid | SH | Cl | O-cyclopropyl |
| amino acid | amino acid | SH | Cl | O-acetyl |
| amino acid | amino acid | SH | Cl | SH |
| amino acid | amino acid | SH | Cl | SMe |
| amino acid | amino acid | SH | Cl | SEt |
| amino acid | amino acid | SH | Cl | S-cyclopropyl |
| amino acid | amino acid | SH | Cl | F |
| amino acid | amino acid | SH | Cl | Cl |
| amino acid | amino acid | SH | Cl | Br |
| amino acid | amino acid | SH | Cl | I |
| amino acid | H | SH | Cl | H |
| amino acid | H | SH | Cl | $NH_2$ |
| amino acid | H | SH | Cl | NH-cyclopropyl |
| amino acid | H | SH | Cl | NH-methyl |
| amino acid | H | SH | Cl | NH-ethyl |
| amino acid | H | SH | Cl | NH-acetyl |
| amino acid | H | SH | Cl | OH |
| amino acid | H | SH | Cl | OMe |
| amino acid | H | SH | Cl | OEt |
| amino acid | H | SH | Cl | O-cyclopropyl |
| amino acid | H | SH | Cl | O-acetyl |
| amino acid | H | SH | Cl | SH |
| amino acid | H | SH | Cl | SMe |
| amino acid | H | SH | Cl | SEt |
| amino acid | H | SH | Cl | S-cyclopropyl |
| amino acid | H | SH | Cl | F |
| amino acid | H | SH | Cl | Cl |
| amino acid | H | SH | Cl | Br |
| amino acid | H | SH | Cl | I |
| amino acid | acyl | SH | Cl | H |
| amino acid | acyl | SH | Cl | $NH_2$ |
| amino acid | acyl | SH | Cl | NH-cyclopropyl |
| amino acid | acyl | SH | Cl | NH-methyl |
| amino acid | acyl | SH | Cl | NH-ethyl |
| amino acid | acyl | SH | Cl | NH-acetyl |
| amino acid | acyl | SH | Cl | OH |
| amino acid | acyl | SH | Cl | OMe |
| amino acid | acyl | SH | Cl | OEt |
| amino acid | acyl | SH | Cl | O-cyclopropyl |
| amino acid | acyl | SH | Cl | O-acetyl |
| amino acid | acyl | SH | Cl | SH |
| amino acid | acyl | SH | Cl | SMe |
| amino acid | acyl | SH | Cl | SEt |
| amino acid | acyl | SH | Cl | S-cyclopropyl |
| amino acid | acyl | SH | Cl | F |
| amino acid | acyl | SH | Cl | Cl |
| amino acid | acyl | SH | Cl | Br |
| amino acid | acyl | SH | Cl | I |
| acyl | H | OH | Cl | H |
| acyl | H | OH | Cl | $NH_2$ |
| acyl | H | OH | Cl | NH-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | OH | Cl | NH-methyl |
| acyl | H | OH | Cl | NH-ethyl |
| acyl | H | OH | Cl | NH-acetyl |
| acyl | H | OH | Cl | OH |
| acyl | H | OH | Cl | OMe |
| acyl | H | OH | Cl | OEt |
| acyl | H | OH | Cl | O-cyclopropyl |
| acyl | H | OH | Cl | O-acetyl |
| acyl | H | OH | Cl | SH |
| acyl | H | OH | Cl | SMe |
| acyl | H | OH | Cl | SEt |
| acyl | H | OH | Cl | S-cyclopropyl |
| acyl | H | OH | Cl | F |
| acyl | H | OH | Cl | Cl |
| acyl | H | OH | Cl | Br |
| acyl | H | OH | Cl | I |
| acyl | acyl | OH | Cl | H |
| acyl | acyl | OH | Cl | $NH_2$ |
| acyl | acyl | OH | Cl | NH-cyclopropyl |
| acyl | acyl | OH | Cl | NH-methyl |
| acyl | acyl | OH | Cl | NH-ethyl |
| acyl | acyl | OH | Cl | NH-acetyl |
| acyl | acyl | OH | Cl | OH |
| acyl | acyl | OH | Cl | OMe |
| acyl | acyl | OH | Cl | OEt |
| acyl | acyl | OH | Cl | O-cyclopropyl |
| acyl | acyl | OH | Cl | O-acetyl |
| acyl | acyl | OH | Cl | SH |
| acyl | acyl | OH | Cl | SMe |
| acyl | acyl | OH | Cl | SEt |
| acyl | acyl | OH | Cl | S-cyclopropyl |
| acyl | acyl | OH | Cl | F |
| acyl | acyl | OH | Cl | Cl |
| acyl | acyl | OH | Cl | Br |
| acyl | acyl | OH | Cl | I |
| acyl | amino acid | OH | Cl | H |
| acyl | amino acid | OH | Cl | $NH_2$ |
| acyl | amino acid | OH | Cl | NH-cyclopropyl |
| acyl | amino acid | OH | Cl | NH-methyl |
| acyl | amino acid | OH | Cl | NH-ethyl |
| acyl | amino acid | OH | Cl | NH-acetyl |
| acyl | amino acid | OH | Cl | OH |
| acyl | amino acid | OH | Cl | OMe |
| acyl | amino acid | OH | Cl | OEt |
| acyl | amino acid | OH | Cl | O-cyclopropyl |
| acyl | amino acid | OH | Cl | O-acetyl |
| acyl | amino acid | OH | Cl | SH |
| acyl | amino acid | OH | Cl | SMe |
| acyl | amino acid | OH | Cl | SEt |
| acyl | amino acid | OH | Cl | S-cyclopropyl |
| acyl | amino acid | OH | Cl | F |
| acyl | amino acid | OH | Cl | Cl |
| acyl | amino acid | OH | Cl | Br |
| acyl | amino acid | OH | Cl | I |
| H | acyl | OH | Cl | H |
| H | acyl | OH | Cl | $NH_2$ |
| H | acyl | OH | Cl | NH-cyclopropyl |
| H | acyl | OH | Cl | NH-methyl |
| H | acyl | OH | Cl | NH-ethyl |
| H | acyl | OH | Cl | NH-acetyl |
| H | acyl | OH | Cl | OH |
| H | acyl | OH | Cl | OMe |
| H | acyl | OH | Cl | OEt |
| H | acyl | OH | Cl | O-cyclopropyl |
| H | acyl | OH | Cl | O-acetyl |
| H | acyl | OH | Cl | SH |
| H | acyl | OH | Cl | SMe |
| H | acyl | OH | Cl | SEt |
| H | acyl | OH | Cl | S-cyclopropyl |
| H | acyl | OH | Cl | F |
| H | acyl | OH | Cl | Cl |
| H | acyl | OH | Cl | Br |
| H | acyl | OH | Cl | I |
| H | amino acid | OH | Cl | H |
| H | amino acid | OH | Cl | $NH_2$ |
| H | amino acid | OH | Cl | NH-cyclopropyl |
| H | amino acid | OH | Cl | NH-methyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | OH | Cl | NH-ethyl |
| H | amino acid | OH | Cl | NH-acetyl |
| H | amino acid | OH | Cl | OH |
| H | amino acid | OH | Cl | OMe |
| H | amino acid | OH | Cl | OEt |
| H | amino acid | OH | Cl | O-cyclopropyl |
| H | amino acid | OH | Cl | O-acetyl |
| H | amino acid | OH | Cl | SH |
| H | amino acid | OH | Cl | SMe |
| H | amino acid | OH | Cl | SEt |
| H | amino acid | OH | Cl | S-cyclopropyl |
| H | amino acid | OH | Cl | F |
| H | amino acid | OH | Cl | Cl |
| H | amino acid | OH | Cl | Br |
| H | amino acid | OH | Cl | I |
| amino acid | amino acid | OH | Cl | H |
| amino acid | amino acid | OH | Cl | $NH_2$ |
| amino acid | amino acid | OH | Cl | NH-cyclopropyl |
| amino acid | amino acid | OH | Cl | NH-methyl |
| amino acid | amino acid | OH | Cl | NH-ethyl |
| amino acid | amino acid | OH | Cl | NH-acetyl |
| amino acid | amino acid | OH | Cl | OH |
| amino acid | amino acid | OH | Cl | OMe |
| amino acid | amino acid | OH | Cl | OEt |
| amino acid | amino acid | OH | Cl | O-cyclopropyl |
| amino acid | amino acid | OH | Cl | O-acetyl |
| amino acid | amino acid | OH | Cl | SH |
| amino acid | amino acid | OH | Cl | SMe |
| amino acid | amino acid | OH | Cl | SEt |
| amino acid | amino acid | OH | Cl | S-cyclopropyl |
| amino acid | amino acid | OH | Cl | F |
| amino acid | amino acid | OH | Cl | Cl |
| amino acid | amino acid | OH | Cl | Br |
| amino acid | amino acid | OH | Cl | I |
| amino acid | H | OH | Cl | H |
| amino acid | H | OH | Cl | $NH_2$ |
| amino acid | H | OH | Cl | NH-cyclopropyl |
| amino acid | H | OH | Cl | NH-methyl |
| amino acid | H | OH | Cl | NH-ethyl |
| amino acid | H | OH | Cl | NH-acetyl |
| amino acid | H | OH | Cl | OH |
| amino acid | H | OH | Cl | OMe |
| amino acid | H | OH | Cl | OEt |
| amino acid | H | OH | Cl | O-cyclopropyl |
| amino acid | H | OH | Cl | O-acetyl |
| amino acid | H | OH | Cl | SH |
| amino acid | H | OH | Cl | SMe |
| amino acid | H | OH | Cl | SEt |
| amino acid | H | OH | Cl | S-cyclopropyl |
| amino acid | H | OH | Cl | F |
| amino acid | H | OH | Cl | Cl |
| amino acid | H | OH | Cl | Br |
| amino acid | H | OH | Cl | I |
| amino acid | acyl | OH | Cl | H |
| amino acid | acyl | OH | Cl | $NH_2$ |
| amino acid | acyl | OH | Cl | NH-cyclopropyl |
| amino acid | acyl | OH | Cl | NH-methyl |
| amino acid | acyl | OH | Cl | NH-ethyl |
| amino acid | acyl | OH | Cl | NH-acetyl |
| amino acid | acyl | OH | Cl | OH |
| amino acid | acyl | OH | Cl | OMe |
| amino acid | acyl | OH | Cl | OEt |
| amino acid | acyl | OH | Cl | O-cyclopropyl |
| amino acid | acyl | OH | Cl | O-acetyl |
| amino acid | acyl | OH | Cl | SH |
| amino acid | acyl | OH | Cl | SMe |
| amino acid | acyl | OH | Cl | SEt |
| amino acid | acyl | OH | Cl | S-cyclopropyl |
| amino acid | acyl | OH | Cl | F |
| amino acid | acyl | OH | Cl | Cl |
| amino acid | acyl | OH | Cl | Br |
| amino acid | acyl | OH | Cl | I |
| acyl | H | $CH_3$ | F | H |
| acyl | H | $CH_3$ | F | $NH_2$ |
| acyl | H | $CH_3$ | F | NH-cyclopropyl |
| acyl | H | $CH_3$ | F | NH-methyl |
| acyl | H | $CH_3$ | F | NH-ethyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | $CH_3$ | F | NH-acetyl |
| acyl | H | $CH_3$ | F | OH |
| acyl | H | $CH_3$ | F | OMe |
| acyl | H | $CH_3$ | F | OEt |
| acyl | H | $CH_3$ | F | O-cyclopropyl |
| acyl | H | $CH_3$ | F | O-acetyl |
| acyl | H | $CH_3$ | F | SH |
| acyl | H | $CH_3$ | F | SMe |
| acyl | H | $CH_3$ | F | SEt |
| acyl | H | $CH_3$ | F | S-cyclopropyl |
| acyl | H | $CH_3$ | F | F |
| acyl | H | $CH_3$ | F | Cl |
| acyl | H | $CH_3$ | F | Br |
| acyl | H | $CH_3$ | F | I |
| acyl | acyl | $CH_3$ | F | H |
| acyl | acyl | $CH_3$ | F | $NH_2$ |
| acyl | acyl | $CH_3$ | F | NH-cyclopropyl |
| acyl | acyl | $CH_3$ | F | NH-methyl |
| acyl | acyl | $CH_3$ | F | NH-ethyl |
| acyl | acyl | $CH_3$ | F | NH-acetyl |
| acyl | acyl | $CH_3$ | F | OH |
| acyl | acyl | $CH_3$ | F | OMe |
| acyl | acyl | $CH_3$ | F | OEt |
| acyl | acyl | $CH_3$ | F | O-cyclopropyl |
| acyl | acyl | $CH_3$ | F | O-acetyl |
| acyl | acyl | $CH_3$ | F | SH |
| acyl | acyl | $CH_3$ | F | SMe |
| acyl | acyl | $CH_3$ | F | SEt |
| acyl | acyl | $CH_3$ | F | S-cyclopropyl |
| acyl | acyl | $CH_3$ | F | F |
| acyl | acyl | $CH_3$ | F | Cl |
| acyl | acyl | $CH_3$ | F | Br |
| acyl | acyl | $CH_3$ | F | I |
| acyl | amino acid | $CH_3$ | F | H |
| acyl | amino acid | $CH_3$ | F | $NH_2$ |
| acyl | amino acid | $CH_3$ | F | NH-cyclopropyl |
| acyl | amino acid | $CH_3$ | F | NH-methyl |
| acyl | amino acid | $CH_3$ | F | NH-ethyl |
| acyl | amino acid | $CH_3$ | F | NH-acetyl |
| acyl | amino acid | $CH_3$ | F | OH |
| acyl | amino acid | $CH_3$ | F | OMe |
| acyl | amino acid | $CH_3$ | F | OEt |
| acyl | amino acid | $CH_3$ | F | O-cyclopropyl |
| acyl | amino acid | $CH_3$ | F | O-acetyl |
| acyl | amino acid | $CH_3$ | F | SH |
| acyl | amino acid | $CH_3$ | F | SMe |
| acyl | amino acid | $CH_3$ | F | SEt |
| acyl | amino acid | $CH_3$ | F | S-cyclopropyl |
| acyl | amino acid | $CH_3$ | F | F |
| acyl | amino acid | $CH_3$ | F | Cl |
| acyl | amino acid | $CH_3$ | F | Br |
| acyl | amino acid | $CH_3$ | F | I |
| H | acyl | $CH_3$ | F | H |
| H | acyl | $CH_3$ | F | $NH_2$ |
| H | acyl | $CH_3$ | F | NH-cyclopropyl |
| H | acyl | $CH_3$ | F | NH-methyl |
| H | acyl | $CH_3$ | F | NH-ethyl |
| H | acyl | $CH_3$ | F | NH-acetyl |
| H | acyl | $CH_3$ | F | OH |
| H | acyl | $CH_3$ | F | OMe |
| H | acyl | $CH_3$ | F | OEt |
| H | acyl | $CH_3$ | F | O-cyclopropyl |
| H | acyl | $CH_3$ | F | O-acetyl |
| H | acyl | $CH_3$ | F | SH |
| H | acyl | $CH_3$ | F | SMe |
| H | acyl | $CH_3$ | F | SEt |
| H | acyl | $CH_3$ | F | S-cyclopropyl |
| H | acyl | $CH_3$ | F | F |
| H | acyl | $CH_3$ | F | Cl |
| H | acyl | $CH_3$ | F | Br |
| H | acyl | $CH_3$ | F | I |
| H | amino acid | $CH_3$ | F | H |
| H | amino acid | $CH_3$ | F | $NH_2$ |
| H | amino acid | $CH_3$ | F | NH-cyclopropyl |
| H | amino acid | $CH_3$ | F | NH-methyl |
| H | amino acid | $CH_3$ | F | NH-ethyl |
| H | amino acid | $CH_3$ | F | NH-acetyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | $CH_3$ | F | OH |
| H | amino acid | $CH_3$ | F | OMe |
| H | amino acid | $CH_3$ | F | OEt |
| H | amino acid | $CH_3$ | F | O-cyclopropyl |
| H | amino acid | $CH_3$ | F | O-acetyl |
| H | amino acid | $CH_3$ | F | SH |
| H | amino acid | $CH_3$ | F | SMe |
| H | amino acid | $CH_3$ | F | SEt |
| H | amino acid | $CH_3$ | F | S-cyclopropyl |
| H | amino acid | $CH_3$ | F | F |
| H | amino acid | $CH_3$ | F | Cl |
| H | amino acid | $CH_3$ | F | Br |
| H | amino acid | $CH_3$ | F | I |
| amino acid | amino acid | $CH_3$ | F | H |
| amino acid | amino acid | $CH_3$ | F | $NH_2$ |
| amino acid | amino acid | $CH_3$ | F | NH-cyclopropyl |
| amino acid | amino acid | $CH_3$ | F | NH-methyl |
| amino acid | amino acid | $CH_3$ | F | NH-ethyl |
| amino acid | amino acid | $CH_3$ | F | NH-acetyl |
| amino acid | amino acid | $CH_3$ | F | OH |
| amino acid | amino acid | $CH_3$ | F | OMe |
| amino acid | amino acid | $CH_3$ | F | OEt |
| amino acid | amino acid | $CH_3$ | F | O-cyclopropyl |
| amino acid | amino acid | $CH_3$ | F | O-acetyl |
| amino acid | amino acid | $CH_3$ | F | SH |
| amino acid | amino acid | $CH_3$ | F | SMe |
| amino acid | amino acid | $CH_3$ | F | SEt |
| amino acid | amino acid | $CH_3$ | F | S-cyclopropyl |
| amino acid | amino acid | $CH_3$ | F | F |
| amino acid | amino acid | $CH_3$ | F | Cl |
| amino acid | amino acid | $CH_3$ | F | Br |
| amino acid | amino acid | $CH_3$ | F | I |
| amino acid | H | $CH_3$ | F | H |
| amino acid | H | $CH_3$ | F | $NH_2$ |
| amino acid | H | $CH_3$ | F | NH-cyclopropyl |
| amino acid | H | $CH_3$ | F | NH-methyl |
| amino acid | H | $CH_3$ | F | NH-ethyl |
| amino acid | H | $CH_3$ | F | NH-acetyl |
| amino acid | H | $CH_3$ | F | OH |
| amino acid | H | $CH_3$ | F | OMe |
| amino acid | H | $CH_3$ | F | OEt |
| amino acid | H | $CH_3$ | F | O-cyclopropyl |
| amino acid | H | $CH_3$ | F | O-acetyl |
| amino acid | H | $CH_3$ | F | SH |
| amino acid | H | $CH_3$ | F | SMe |
| amino acid | H | $CH_3$ | F | SEt |
| amino acid | H | $CH_3$ | F | S-cyclopropyl |
| amino acid | H | $CH_3$ | F | F |
| amino acid | H | $CH_3$ | F | Cl |
| amino acid | H | $CH_3$ | F | Br |
| amino acid | H | $CH_3$ | F | I |
| amino acid | acyl | $CH_3$ | F | H |
| amino acid | acyl | $CH_3$ | F | $NH_2$ |
| amino acid | acyl | $CH_3$ | F | NH-cyclopropyl |
| amino acid | acyl | $CH_3$ | F | NH-methyl |
| amino acid | acyl | $CH_3$ | F | NH-ethyl |
| amino acid | acyl | $CH_3$ | F | NH-acetyl |
| amino acid | acyl | $CH_3$ | F | OH |
| amino acid | acyl | $CH_3$ | F | OMe |
| amino acid | acyl | $CH_3$ | F | OEt |
| amino acid | acyl | $CH_3$ | F | O-cyclopropyl |
| amino acid | acyl | $CH_3$ | F | O-acetyl |
| amino acid | acyl | $CH_3$ | F | SH |
| amino acid | acyl | $CH_3$ | F | SMe |
| amino acid | acyl | $CH_3$ | F | SEt |
| amino acid | acyl | $CH_3$ | F | S-cyclopropyl |
| amino acid | acyl | $CH_3$ | F | F |
| amino acid | acyl | $CH_3$ | F | Cl |
| amino acid | acyl | $CH_3$ | F | Br |
| amino acid | acyl | $CH_3$ | F | I |
| acyl | H | $CF_3$ | F | H |
| acyl | H | $CF_3$ | F | $NH_2$ |
| acyl | H | $CF_3$ | F | NH-cyclopropyl |
| acyl | H | $CF_3$ | F | NH-methyl |
| acyl | H | $CF_3$ | F | NH-ethyl |
| acyl | H | $CF_3$ | F | NH-acetyl |
| acyl | H | $CF_3$ | F | OH |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | $CF_3$ | F | OMe |
| acyl | H | $CF_3$ | F | OEt |
| acyl | H | $CF_3$ | F | O-cyclopropyl |
| acyl | H | $CF_3$ | F | O-acetyl |
| acyl | H | $CF_3$ | F | SH |
| acyl | H | $CF_3$ | F | SMe |
| acyl | H | $CF_3$ | F | SEt |
| acyl | H | $CF_3$ | F | S-cyclopropyl |
| acyl | H | $CF_3$ | F | F |
| acyl | H | $CF_3$ | F | Cl |
| acyl | H | $CF_3$ | F | Br |
| acyl | H | $CF_3$ | F | I |
| acyl | acyl | $CF_3$ | F | H |
| acyl | acyl | $CF_3$ | F | $NH_2$ |
| acyl | acyl | $CF_3$ | F | NH-cyclopropyl |
| acyl | acyl | $CF_3$ | F | NH-methyl |
| acyl | acyl | $CF_3$ | F | NH-ethyl |
| acyl | acyl | $CF_3$ | F | NH-acetyl |
| acyl | acyl | $CF_3$ | F | OH |
| acyl | acyl | $CF_3$ | F | OMe |
| acyl | acyl | $CF_3$ | F | OEt |
| acyl | acyl | $CF_3$ | F | O-cyclopropyl |
| acyl | acyl | $CF_3$ | F | O-acetyl |
| acyl | acyl | $CF_3$ | F | SH |
| acyl | acyl | $CF_3$ | F | SMe |
| acyl | acyl | $CF_3$ | F | SEt |
| acyl | acyl | $CF_3$ | F | S-cyclopropyl |
| acyl | acyl | $CF_3$ | F | F |
| acyl | acyl | $CF_3$ | F | Cl |
| acyl | acyl | $CF_3$ | F | Br |
| acyl | acyl | $CF_3$ | F | I |
| acyl | amino acid | $CF_3$ | F | H |
| acyl | amino acid | $CF_3$ | F | $NH_2$ |
| acyl | amino acid | $CF_3$ | F | NH-cyclopropyl |
| acyl | amino acid | $CF_3$ | F | NH-methyl |
| acyl | amino acid | $CF_3$ | F | NH-ethyl |
| acyl | amino acid | $CF_3$ | F | NH-acetyl |
| acyl | amino acid | $CF_3$ | F | OH |
| acyl | amino acid | $CF_3$ | F | OMe |
| acyl | amino acid | $CF_3$ | F | OEt |
| acyl | amino acid | $CF_3$ | F | O-cyclopropyl |
| acyl | amino acid | $CF_3$ | F | O-acetyl |
| acyl | amino acid | $CF_3$ | F | SH |
| acyl | amino acid | $CF_3$ | F | SMe |
| acyl | amino acid | $CF_3$ | F | SEt |
| acyl | amino acid | $CF_3$ | F | S-cyclopropyl |
| acyl | amino acid | $CF_3$ | F | F |
| acyl | amino acid | $CF_3$ | F | Cl |
| acyl | amino acid | $CF_3$ | F | Br |
| acyl | amino acid | $CF_3$ | F | I |
| H | acyl | $CF_3$ | F | H |
| H | acyl | $CF_3$ | F | $NH_2$ |
| H | acyl | $CF_3$ | F | NH-cyclopropyl |
| H | acyl | $CF_3$ | F | NH-methyl |
| H | acyl | $CF_3$ | F | NH-ethyl |
| H | acyl | $CF_3$ | F | NH-acetyl |
| H | acyl | $CF_3$ | F | OH |
| H | acyl | $CF_3$ | F | OMe |
| H | acyl | $CF_3$ | F | OEt |
| H | acyl | $CF_3$ | F | O-cyclopropyl |
| H | acyl | $CF_3$ | F | O-acetyl |
| H | acyl | $CF_3$ | F | SH |
| H | acyl | $CF_3$ | F | SMe |
| H | acyl | $CF_3$ | F | SEt |
| H | acyl | $CF_3$ | F | S-cyclopropyl |
| H | acyl | $CF_3$ | F | F |
| H | acyl | $CF_3$ | F | Cl |
| H | acyl | $CF_3$ | F | Br |
| H | acyl | $CF_3$ | F | I |
| H | amino acid | $CF_3$ | F | H |
| H | amino acid | $CF_3$ | F | $NH_2$ |
| H | amino acid | $CF_3$ | F | NH-cyclopropyl |
| H | amino acid | $CF_3$ | F | NH-methyl |
| H | amino acid | $CF_3$ | F | NH-ethyl |
| H | amino acid | $CF_3$ | F | NH-acetyl |
| H | amino acid | $CF_3$ | F | OH |
| H | amino acid | $CF_3$ | F | OMe |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | $CF_3$ | F | OEt |
| H | amino acid | $CF_3$ | F | O-cyclopropyl |
| H | amino acid | $CF_3$ | F | O-acetyl |
| H | amino acid | $CF_3$ | F | SH |
| H | amino acid | $CF_3$ | F | SMe |
| H | amino acid | $CF_3$ | F | SEt |
| H | amino acid | $CF_3$ | F | S-cyclopropyl |
| H | amino acid | $CF_3$ | F | F |
| H | amino acid | $CF_3$ | F | Cl |
| H | amino acid | $CF_3$ | F | Br |
| H | amino acid | $CF_3$ | F | I |
| amino acid | amino acid | $CF_3$ | F | H |
| amino acid | amino acid | $CF_3$ | F | $NH_2$ |
| amino acid | amino acid | $CF_3$ | F | NH-cyclopropyl |
| amino acid | amino acid | $CF_3$ | F | NH-methyl |
| amino acid | amino acid | $CF_3$ | F | NH-ethyl |
| amino acid | amino acid | $CF_3$ | F | NH-acetyl |
| amino acid | amino acid | $CF_3$ | F | OH |
| amino acid | amino acid | $CF_3$ | F | OMe |
| amino acid | amino acid | $CF_3$ | F | OEt |
| amino acid | amino acid | $CF_3$ | F | O-cyclopropyl |
| amino acid | amino acid | $CF_3$ | F | O-acetyl |
| amino acid | amino acid | $CF_3$ | F | SH |
| amino acid | amino acid | $CF_3$ | F | SMe |
| amino acid | amino acid | $CF_3$ | F | SEt |
| amino acid | amino acid | $CF_3$ | F | S-cyclopropyl |
| amino acid | amino acid | $CF_3$ | F | F |
| amino acid | amino acid | $CF_3$ | F | Cl |
| amino acid | amino acid | $CF_3$ | F | Br |
| amino acid | amino acid | $CF_3$ | F | I |
| amino acid | H | $CF_3$ | F | H |
| amino acid | H | $CF_3$ | F | $NH_2$ |
| amino acid | H | $CF_3$ | F | NH-cyclopropyl |
| amino acid | H | $CF_3$ | F | NH-methyl |
| amino acid | H | $CF_3$ | F | NH-ethyl |
| amino acid | H | $CF_3$ | F | NH-acetyl |
| amino acid | H | $CF_3$ | F | OH |
| amino acid | H | $CF_3$ | F | OMe |
| amino acid | H | $CF_3$ | F | OEt |
| amino acid | H | $CF_3$ | F | O-cyclopropyl |
| amino acid | H | $CF_3$ | F | O-acetyl |
| amino acid | H | $CF_3$ | F | SH |
| amino acid | H | $CF_3$ | F | SMe |
| amino acid | H | $CF_3$ | F | SEt |
| amino acid | H | $CF_3$ | F | S-cyclopropyl |
| amino acid | H | $CF_3$ | F | F |
| amino acid | H | $CF_3$ | F | Cl |
| amino acid | H | $CF_3$ | F | Br |
| amino acid | H | $CF_3$ | F | I |
| amino acid | acyl | $CF_3$ | F | H |
| amino acid | acyl | $CF_3$ | F | $NH_2$ |
| amino acid | acyl | $CF_3$ | F | NH-cyclopropyl |
| amino acid | acyl | $CF_3$ | F | NH-methyl |
| amino acid | acyl | $CF_3$ | F | NH-ethyl |
| amino acid | acyl | $CF_3$ | F | NH-acetyl |
| amino acid | acyl | $CF_3$ | F | OH |
| amino acid | acyl | $CF_3$ | F | OMe |
| amino acid | acyl | $CF_3$ | F | OEt |
| amino acid | acyl | $CF_3$ | F | O-cyclopropyl |
| amino acid | acyl | $CF_3$ | F | O-acetyl |
| amino acid | acyl | $CF_3$ | F | SH |
| amino acid | acyl | $CF_3$ | F | SMe |
| amino acid | acyl | $CF_3$ | F | SEt |
| amino acid | acyl | $CF_3$ | F | S-cyclopropyl |
| amino acid | acyl | $CF_3$ | F | F |
| amino acid | acyl | $CF_3$ | F | Cl |
| amino acid | acyl | $CF_3$ | F | Br |
| amino acid | acyl | $CF_3$ | F | I |
| acyl | H | Br | F | H |
| acyl | H | Br | F | $NH_2$ |
| acyl | H | Br | F | NH-cyclopropyl |
| acyl | H | Br | F | NH-methyl |
| acyl | H | Br | F | NH-ethyl |
| acyl | H | Br | F | NH-acetyl |
| acyl | H | Br | F | OH |
| acyl | H | Br | F | OMe |
| acyl | H | Br | F | OEt |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | Br | F | O-cyclopropyl |
| acyl | H | Br | F | O-acetyl |
| acyl | H | Br | F | SH |
| acyl | H | Br | F | SMe |
| acyl | H | Br | F | SEt |
| acyl | H | Br | F | S-cyclopropyl |
| acyl | H | Br | F | F |
| acyl | H | Br | F | Cl |
| acyl | H | Br | F | Br |
| acyl | H | Br | F | I |
| acyl | acyl | Br | F | H |
| acyl | acyl | Br | F | $NH_2$ |
| acyl | acyl | Br | F | NH-cyclopropyl |
| acyl | acyl | Br | F | NH-methyl |
| acyl | acyl | Br | F | NH-ethyl |
| acyl | acyl | Br | F | NH-acetyl |
| acyl | acyl | Br | F | OH |
| acyl | acyl | Br | F | OMe |
| acyl | acyl | Br | F | OEt |
| acyl | acyl | Br | F | O-cyclopropyl |
| acyl | acyl | Br | F | O-acetyl |
| acyl | acyl | Br | F | SH |
| acyl | acyl | Br | F | SMe |
| acyl | acyl | Br | F | SEt |
| acyl | acyl | Br | F | S-cyclopropyl |
| acyl | acyl | Br | F | F |
| acyl | acyl | Br | F | Cl |
| acyl | acyl | Br | F | Br |
| acyl | acyl | Br | F | I |
| acyl | amino acid | Br | F | H |
| acyl | amino acid | Br | F | $NH_2$ |
| acyl | amino acid | Br | F | NH-cyclopropyl |
| acyl | amino acid | Br | F | NH-methyl |
| acyl | amino acid | Br | F | NH-ethyl |
| acyl | amino acid | Br | F | NH-acetyl |
| acyl | amino acid | Br | F | OH |
| acyl | amino acid | Br | F | OMe |
| acyl | amino acid | Br | F | OEt |
| acyl | amino acid | Br | F | O-cyclopropyl |
| acyl | amino acid | Br | F | O-acetyl |
| acyl | amino acid | Br | F | SH |
| acyl | amino acid | Br | F | SMe |
| acyl | amino acid | Br | F | SEt |
| acyl | amino acid | Br | F | S-cyclopropyl |
| acyl | amino acid | Br | F | F |
| acyl | amino acid | Br | F | Cl |
| acyl | amino acid | Br | F | Br |
| acyl | amino acid | Br | F | I |
| H | acyl | Br | F | H |
| H | acyl | Br | F | $NH_2$ |
| H | acyl | Br | F | NH-cyclopropyl |
| H | acyl | Br | F | NH-methyl |
| H | acyl | Br | F | NH-ethyl |
| H | acyl | Br | F | NH-acetyl |
| H | acyl | Br | F | OH |
| H | acyl | Br | F | OMe |
| H | acyl | Br | F | OEt |
| H | acyl | Br | F | O-cyclopropyl |
| H | acyl | Br | F | O-acetyl |
| H | acyl | Br | F | SH |
| H | acyl | Br | F | SMe |
| H | acyl | Br | F | SEt |
| H | acyl | Br | F | S-cyclopropyl |
| H | acyl | Br | F | F |
| H | acyl | Br | F | Cl |
| H | acyl | Br | F | Br |
| H | acyl | Br | F | I |
| H | amino acid | Br | F | H |
| H | amino acid | Br | F | $NH_2$ |
| H | amino acid | Br | F | NH-cyclopropyl |
| H | amino acid | Br | F | NH-methyl |
| H | amino acid | Br | F | NH-ethyl |
| H | amino acid | Br | F | NH-acetyl |
| H | amino acid | Br | F | OH |
| H | amino acid | Br | F | OMe |
| H | amino acid | Br | F | OEt |
| H | amino acid | Br | F | O-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | Br | F | O-acetyl |
| H | amino acid | Br | F | SH |
| H | amino acid | Br | F | SMe |
| H | amino acid | Br | F | SEt |
| H | amino acid | Br | F | S-cyclopropyl |
| H | amino acid | Br | F | F |
| H | amino acid | Br | F | Cl |
| H | amino acid | Br | F | Br |
| H | amino acid | Br | F | I |
| amino acid | amino acid | Br | F | H |
| amino acid | amino acid | Br | F | $NH_2$ |
| amino acid | amino acid | Br | F | NH-cyclopropyl |
| amino acid | amino acid | Br | F | NH-methyl |
| amino acid | amino acid | Br | F | NH-ethyl |
| amino acid | amino acid | Br | F | NH-acetyl |
| amino acid | amino acid | Br | F | OH |
| amino acid | amino acid | Br | F | OMe |
| amino acid | amino acid | Br | F | OEt |
| amino acid | amino acid | Br | F | O-cyclopropyl |
| amino acid | amino acid | Br | F | O-acetyl |
| amino acid | amino acid | Br | F | SH |
| amino acid | amino acid | Br | F | SMe |
| amino acid | amino acid | Br | F | SEt |
| amino acid | amino acid | Br | F | S-cyclopropyl |
| amino acid | amino acid | Br | F | F |
| amino acid | amino acid | Br | F | Cl |
| amino acid | amino acid | Br | F | Br |
| amino acid | amino acid | Br | F | I |
| amino acid | H | Br | F | H |
| amino acid | H | Br | F | $NH_2$ |
| amino acid | H | Br | F | NH-cyclopropyl |
| amino acid | H | Br | F | NH-methyl |
| amino acid | H | Br | F | NH-ethyl |
| amino acid | H | Br | F | NH-acetyl |
| amino acid | H | Br | F | OH |
| amino acid | H | Br | F | OMe |
| amino acid | H | Br | F | OEt |
| amino acid | H | Br | F | O-cyclopropyl |
| amino acid | H | Br | F | O-acetyl |
| amino acid | H | Br | F | SH |
| amino acid | H | Br | F | SMe |
| amino acid | H | Br | F | SEt |
| amino acid | H | Br | F | S-cyclopropyl |
| amino acid | H | Br | F | F |
| amino acid | H | Br | F | Cl |
| amino acid | H | Br | F | Br |
| amino acid | H | Br | F | I |
| amino acid | acyl | Br | F | H |
| amino acid | acyl | Br | F | $NH_2$ |
| amino acid | acyl | Br | F | NH-cyclopropyl |
| amino acid | acyl | Br | F | NH-methyl |
| amino acid | acyl | Br | F | NH-ethyl |
| amino acid | acyl | Br | F | NH-acetyl |
| amino acid | acyl | Br | F | OH |
| amino acid | acyl | Br | F | OMe |
| amino acid | acyl | Br | F | OEt |
| amino acid | acyl | Br | F | O-cyclopropyl |
| amino acid | acyl | Br | F | O-acetyl |
| amino acid | acyl | Br | F | SH |
| amino acid | acyl | Br | F | SMe |
| amino acid | acyl | Br | F | SEt |
| amino acid | acyl | Br | F | S-cyclopropyl |
| amino acid | acyl | Br | F | F |
| amino acid | acyl | Br | F | Cl |
| amino acid | acyl | Br | F | Br |
| amino acid | acyl | Br | F | I |
| acyl | H | Cl | F | H |
| acyl | H | Cl | F | $NH_2$ |
| acyl | H | Cl | F | NH-cyclopropyl |
| acyl | H | Cl | F | NH-methyl |
| acyl | H | Cl | F | NH-ethyl |
| acyl | H | Cl | F | NH-acetyl |
| acyl | H | Cl | F | OH |
| acyl | H | Cl | F | OMe |
| acyl | H | Cl | F | OEt |
| acyl | H | Cl | F | O-cyclopropyl |
| acyl | H | Cl | F | O-acetyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | Cl | F | SH |
| acyl | H | Cl | F | SMe |
| acyl | H | Cl | F | SEt |
| acyl | H | Cl | F | S-cyclopropyl |
| acyl | H | Cl | F | F |
| acyl | H | Cl | F | Cl |
| acyl | H | Cl | F | Br |
| acyl | H | Cl | F | I |
| acyl | acyl | Cl | F | H |
| acyl | acyl | Cl | F | $NH_2$ |
| acyl | acyl | Cl | F | NH-cyclopropyl |
| acyl | acyl | Cl | F | NH-methyl |
| acyl | acyl | Cl | F | NH-ethyl |
| acyl | acyl | Cl | F | NH-acetyl |
| acyl | acyl | Cl | F | OH |
| acyl | acyl | Cl | F | OMe |
| acyl | acyl | Cl | F | OEt |
| acyl | acyl | Cl | F | O-cyclopropyl |
| acyl | acyl | Cl | F | O-acetyl |
| acyl | acyl | Cl | F | SH |
| acyl | acyl | Cl | F | SMe |
| acyl | acyl | Cl | F | SEt |
| acyl | acyl | Cl | F | S-cyclopropyl |
| acyl | acyl | Cl | F | F |
| acyl | acyl | Cl | F | Cl |
| acyl | acyl | Cl | F | Br |
| acyl | acyl Cl | F | I | |
| acyl | amino acid | Cl | F | H |
| acyl | amino acid | Cl | F | $NH_2$ |
| acyl | amino acid | Cl | F | NH-cyclopropyl |
| acyl | amino acid | Cl | F | NH-methyl |
| acyl | amino acid | Cl | F | NH-ethyl |
| acyl | amino acid | Cl | F | NH-acetyl |
| acyl | amino acid | Cl | F | OH |
| acyl | amino acid | Cl | F | OMe |
| acyl | amino acid | Cl | F | OEt |
| acyl | amino acid | Cl | F | O-cyclopropyl |
| acyl | amino acid | Cl | F | O-acetyl |
| acyl | amino acid | Cl | F | SH |
| acyl | amino acid | Cl | F | SMe |
| acyl | amino acid | Cl | F | SEt |
| acyl | amino acid | Cl | F | S-cyclopropyl |
| acyl | amino acid | Cl | F | F |
| acyl | amino acid | Cl | F | Cl |
| acyl | amino acid | Cl | F | Br |
| acyl | amino acid | Cl | F | I |
| H | acyl | Cl | F | H |
| H | acyl | Cl | F | $NH_2$ |
| H | acyl | Cl | F | NH-cyclopropyl |
| H | acyl | Cl | F | NH-methyl |
| H | acyl | Cl | F | NH-ethyl |
| H | acyl | Cl | F | NH-acetyl |
| H | acyl | Cl | F | OH |
| H | acyl | Cl | F | OMe |
| H | acyl | Cl | F | OEt |
| H | acyl | Cl | F | O-cyclopropyl |
| H | acyl | Cl | F | O-acetyl |
| H | acyl | Cl | F | SH |
| H | acyl | Cl | F | SMe |
| H | acyl | Cl | F | SEt |
| H | acyl | Cl | F | S-cyclopropyl |
| H | acyl | Cl | F | F |
| H | acyl | Cl | F | Cl |
| H | acyl | Cl | F | Br |
| H | acyl | Cl | F | I |
| H | amino acid | Cl | F | H |
| H | amino acid | Cl | F | $NH_2$ |
| H | amino acid | Cl | F | NH-cyclopropyl |
| H | amino acid | Cl | F | NH-methyl |
| H | amino acid | Cl | F | NH-ethyl |
| H | amino acid | Cl | F | NH-acetyl |
| H | amino acid | Cl | F | OH |
| H | amino acid | Cl | F | OMe |
| H | amino acid | Cl | F | OEt |
| H | amino acid | Cl | F | O-cyclopropyl |
| H | amino acid | Cl | F | O-acetyl |
| H | amino acid | Cl | F | SH |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | Cl | F | SMe |
| H | amino acid | Cl | F | SEt |
| H | amino acid | Cl | F | S-cyclopropyl |
| H | amino acid | Cl | F | F |
| H | amino acid | Cl | F | Cl |
| H | amino acid | Cl | F | Br |
| H | amino acid | Cl | F | I |
| amino acid | amino acid | Cl | F | H |
| amino acid | amino acid | Cl | F | $NH_2$ |
| amino acid | amino acid | Cl | F | NH-cyclopropyl |
| amino acid | amino acid | Cl | F | NH-methyl |
| amino acid | amino acid | Cl | F | NH-ethyl |
| amino acid | amino acid | Cl | F | NH-acetyl |
| amino acid | amino acid | Cl | F | OH |
| amino acid | amino acid | Cl | F | OMe |
| amino acid | amino acid | Cl | F | OEt |
| amino acid | amino acid | Cl | F | O-cyclopropyl |
| amino acid | amino acid | Cl | F | O-acetyl |
| amino acid | amino acid | Cl | F | SH |
| amino acid | amino acid | Cl | F | SMe |
| amino acid | amino acid | Cl | F | SEt |
| amino acid | amino acid | Cl | F | S-cyclopropyl |
| amino acid | amino acid | Cl | F | F |
| amino acid | amino acid | Cl | F | Cl |
| amino acid | amino acid | Cl | F | Br |
| amino acid | amino acid | Cl | F | I |
| amino acid | H | Cl | F | H |
| amino acid | H | Cl | F | $NH_2$ |
| amino acid | H | Cl | F | NH-cyclopropyl |
| amino acid | H | Cl | F | NH-methyl |
| amino acid | H | Cl | F | NH-ethyl |
| amino acid | H | Cl | F | NH-acetyl |
| amino acid | H | Cl | F | OH |
| amino acid | H | Cl | F | OMe |
| amino acid | H | Cl | F | OEt |
| amino acid | H | Cl | F | O-cyclopropyl |
| amino acid | H | Cl | F | O-acetyl |
| amino acid | H | Cl | F | SH |
| amino acid | H | Cl | F | SMe |
| amino acid | H | Cl | F | SEt |
| amino acid | H | Cl | F | S-cyclopropyl |
| amino acid | H | Cl | F | F |
| amino acid | H | Cl | F | Cl |
| amino acid | H | Cl | F | Br |
| amino acid | H | Cl | F | I |
| amino acid | acyl | Cl | F | H |
| amino acid | acyl | Cl | F | $NH_2$ |
| amino acid | acyl | Cl | F | NH-cyclopropyl |
| amino acid | acyl | Cl | F | NH-methyl |
| amino acid | acyl | Cl | F | NH-ethyl |
| amino acid | acyl | Cl | F | NH-acetyl |
| amino acid | acyl | Cl | F | OH |
| amino acid | acyl | Cl | F | OMe |
| amino acid | acyl | Cl | F | OEt |
| amino acid | acyl | Cl | F | O-cyclopropyl |
| amino acid | acyl | Cl | F | O-acetyl |
| amino acid | acyl | Cl | F | SH |
| amino acid | acyl | Cl | F | SMe |
| amino acid | acyl | Cl | F | SEt |
| amino acid | acyl | Cl | F | S-cyclopropyl |
| amino acid | acyl | Cl | F | F |
| amino acid | acyl | Cl | F | Cl |
| amino acid | acyl | Cl | F | Br |
| amino acid | acyl | Cl | F | I |
| acyl | H | F | F | H |
| acyl | H | F | F | $NH_2$ |
| acyl | H | F | F | NH-cyclopropyl |
| acyl | H | F | F | NH-methyl |
| acyl | H | F | F | NH-ethyl |
| acyl | H | F | F | NH-acetyl |
| acyl | H | F | F | OH |
| acyl | H | F | F | OMe |
| acyl | H | F | F | OEt |
| acyl | H | F | F | O-cyclopropyl |
| acyl | H | F | F | O-acetyl |
| acyl | H | F | F | SH |
| acyl | H | F | F | SMe |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | F | F | SEt |
| acyl | H | F | F | S-cyclopropyl |
| acyl | H | F | F | F |
| acyl | H | F | F | Cl |
| acyl | H | F | F | Br |
| acyl | H | F | F | I |
| acyl | acyl | F | F | H |
| acyl | acyl | F | F | $NH_2$ |
| acyl | acyl | F | F | NH-cyclopropyl |
| acyl | acyl | F | F | NH-methyl |
| acyl | acyl | F | F | NH-ethyl |
| acyl | acyl | F | F | NH-acetyl |
| acyl | acyl | F | F | OH |
| acyl | acyl | F | F | OMe |
| acyl | acyl | F | F | OEt |
| acyl | acyl | F | F | O-cyclopropyl |
| acyl | acyl | F | F | O-acetyl |
| acyl | acyl | F | F | SH |
| acyl | acyl | F | F | SMe |
| acyl | acyl | F | F | SEt |
| acyl | acyl | F | F | S-cyclopropyl |
| acyl | acyl | F | F | F |
| acyl | acyl | F | F | Cl |
| acyl | acyl | F | F | Br |
| acyl | acyl | F | F | I |
| acyl | amino acid | F | F | H |
| acyl | amino acid | F | F | $NH_2$ |
| acyl | amino acid | F | F | NH-cyclopropyl |
| acyl | amino acid | F | F | NH-methyl |
| acyl | amino acid | F | F | NH-ethyl |
| acyl | amino acid | F | F | NH-acetyl |
| acyl | amino acid | F | F | OH |
| acyl | amino acid | F | F | OMe |
| acyl | amino acid | F | F | OEt |
| acyl | amino acid | F | F | O-cyclopropyl |
| acyl | amino acid | F | F | O-acetyl |
| acyl | amino acid | F | F | SH |
| acyl | amino acid | F | F | SMe |
| acyl | amino acid | F | F | SEt |
| acyl | amino acid | F | F | S-cyclopropyl |
| acyl | amino acid | F | F | F |
| acyl | amino acid | F | F | Cl |
| acyl | amino acid | F | F | Br |
| acyl | amino acid | F | F | I |
| H | acyl | F | F | H |
| H | acyl | F | F | $NH_2$ |
| H | acyl | F | F | NH-cyclopropyl |
| H | acyl | F | F | NH-methyl |
| H | acyl | F | F | NH-ethyl |
| H | acyl | F | F | NH-acetyl |
| H | acyl | F | F | OH |
| H | acyl | F | F | OMe |
| H | acyl | F | F | OEt |
| H | acyl | F | F | O-cyclopropyl |
| H | acyl | F | F | O-acetyl |
| H | acyl | F | F | SH |
| H | acyl | F | F | SMe |
| H | acyl | F | F | SEt |
| H | acyl | F | F | S-cyclopropyl |
| H | acyl | F | F | F |
| H | acyl | F | F | Cl |
| H | acyl | F | F | Br |
| H | acyl | F | F | I |
| H | amino acid | F | F | H |
| H | amino acid | F | F | $NH_2$ |
| H | amino acid | F | F | NH-cyclopropyl |
| H | amino acid | F | F | NH-methyl |
| H | amino acid | F | F | NH-ethyl |
| H | amino acid | F | F | NH-acetyl |
| H | amino acid | F | F | OH |
| H | amino acid | F | F | OMe |
| H | amino acid | F | F | OEt |
| H | amino acid | F | F | O-cyclopropyl |
| H | amino acid | F | F | O-acetyl |
| H | amino acid | F | F | SH |
| H | amino acid | F | F | SMe |
| H | amino acid | F | F | SEt |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | F | F | S-cyclopropyl |
| H | amino acid | F | F | F |
| H | amino acid | F | F | Cl |
| H | amino acid | F | F | Br |
| H | amino acid | F | F | I |
| amino acid | amino acid | F | F | H |
| amino acid | amino acid | F | F | $NH_2$ |
| amino acid | amino acid | F | F | NH-cyclopropyl |
| amino acid | amino acid | F | F | NH-methyl |
| amino acid | amino acid | F | F | NH-ethyl |
| amino acid | amino acid | F | F | NH-acetyl |
| amino acid | amino acid | F | F | OH |
| amino acid | amino acid | F | F | OMe |
| amino acid | amino acid | F | F | OEt |
| amino acid | amino acid | F | F | O-cyclopropyl |
| amino acid | amino acid | F | F | O-acetyl |
| amino acid | amino acid | F | F | SH |
| amino acid | amino acid | F | F | SMe |
| amino acid | amino acid | F | F | SEt |
| amino acid | amino acid | F | F | S-cyclopropyl |
| amino acid | amino acid | F | F | F |
| amino acid | amino acid | F | F | Cl |
| amino acid | amino acid | F | F | Br |
| amino acid | amino acid | F | F | I |
| amino acid | H | F | F | H |
| amino acid | H | F | F | $NH_2$ |
| amino acid | H | F | F | NH-cyclopropyl |
| amino acid | H | F | F | NH-methyl |
| amino acid | H | F | F | NH-ethyl |
| amino acid | H | F | F | NH-acetyl |
| amino acid | H | F | F | OH |
| amino acid | H | F | F | OMe |
| amino acid | H | F | F | OEt |
| amino acid | H | F | F | O-cyclopropyl |
| amino acid | H | F | F | O-acetyl |
| amino acid | H | F | F | SH |
| amino acid | H | F | F | SMe |
| amino acid | H | F | F | SEt |
| amino acid | H | F | F | S-cyclopropyl |
| amino acid | H | F | F | F |
| amino acid | H | F | F | Cl |
| amino acid | H | F | F | Br |
| amino acid | H | F | F | I |
| amino acid | acyl | F | F | H |
| amino acid | acyl | F | F | $NH_2$ |
| amino acid | acyl | F | F | NH-cyclopropyl |
| amino acid | acyl | F | F | NH-methyl |
| amino acid | acyl | F | F | NH-ethyl |
| amino acid | acyl | F | F | NH-acetyl |
| amino acid | acyl | F | F | OH |
| amino acid | acyl | F | F | OMe |
| amino acid | acyl | F | F | OEt |
| amino acid | acyl | F | F | O-cyclopropyl |
| amino acid | acyl | F | F | O-acetyl |
| amino acid | acyl | F | F | SH |
| amino acid | acyl | F | F | SMe |
| amino acid | acyl | F | F | SEt |
| amino acid | acyl | F | F | S-cyclopropyl |
| amino acid | acyl | F | F | F |
| amino acid | acyl | F | F | Cl |
| amino acid | acyl | F | F | Br |
| amino acid | acyl | F | F | I |
| acyl | H | $NH_2$ | F | H |
| acyl | H | $NH_2$ | F | $NH_2$ |
| acyl | H | $NH_2$ | F | NH-cyclopropyl |
| acyl | H | $NH_2$ | F | NH-methyl |
| acyl | H | $NH_2$ | F | NH-ethyl |
| acyl | H | $NH_2$ | F | NH-acetyl |
| acyl | H | $NH_2$ | F | OH |
| acyl | H | $NH_2$ | F | OMe |
| acyl | H | $NH_2$ | F | OEt |
| acyl | H | $NH_2$ | F | O-cyclopropyl |
| acyl | H | $NH_2$ | F | O-acetyl |
| acyl | H | $NH_2$ | F | SH |
| acyl | H | $NH_2$ | F | SMe |
| acyl | H | $NH_2$ | F | SEt |
| acyl | H | $NH_2$ | F | S-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | $NH_2$ | F | F |
| acyl | H | $NH_2$ | F | Cl |
| acyl | H | $NH_2$ | F | Br |
| acyl | H | $NH_2$ | F | I |
| acyl | acyl | $NH_2$ | F | H |
| acyl | acyl | $NH_2$ | F | $NH_2$ |
| acyl | acyl | $NH_2$ | F | NH-cyclopropyl |
| acyl | acyl | $NH_2$ | F | NH-methyl |
| acyl | acyl | $NH_2$ | F | NH-ethyl |
| acyl | acyl | $NH_2$ | F | NH-acetyl |
| acyl | acyl | $NH_2$ | F | OH |
| acyl | acyl | $NH_2$ | F | OMe |
| acyl | acyl | $NH_2$ | F | OEt |
| acyl | acyl | $NH_2$ | F | O-cyclopropyl |
| acyl | acyl | $NH_2$ | F | O-acetyl |
| acyl | acyl | $NH_2$ | F | SH |
| acyl | acyl | $NH_2$ | F | SMe |
| acyl | acyl | $NH_2$ | F | SEt |
| acyl | acyl | $NH_2$ | F | S-cyclopropyl |
| acyl | acyl | $NH_2$ | F | F |
| acyl | acyl | $NH_2$ | F | Cl |
| acyl | acyl | $NH_2$ | F | Br |
| acyl | acyl | $NH_2$ | F | I |
| acyl | amino acid | $NH_2$ | F | H |
| acyl | amino acid | $NH_2$ | F | $NH_2$ |
| acyl | amino acid | $NH_2$ | F | NH-cyclopropyl |
| acyl | amino acid | $NH_2$ | F | NH-methyl |
| acyl | amino acid | $NH_2$ | F | NH-ethyl |
| acyl | amino acid | $NH_2$ | F | NH-acetyl |
| acyl | amino acid | $NH_2$ | F | OH |
| acyl | amino acid | $NH_2$ | F | OMe |
| acyl | amino acid | $NH_2$ | F | OEt |
| acyl | amino acid | $NH_2$ | F | O-cyclopropyl |
| acyl | amino acid | $NH_2$ | F | O-acetyl |
| acyl | amino acid | $NH_2$ | F | SH |
| acyl | amino acid | $NH_2$ | F | SMe |
| acyl | amino acid | $NH_2$ | F | SEt |
| acyl | amino acid | $NH_2$ | F | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | F | F |
| acyl | amino acid | $NH_2$ | F | Cl |
| acyl | amino acid | $NH_2$ | F | Br |
| acyl | amino acid | $NH_2$ | F | I |
| H | acyl | $NH_2$ | F | H |
| H | acyl | $NH_2$ | F | $NH_2$ |
| H | acyl | $NH_2$ | F | NH-cyclopropyl |
| H | acyl | $NH_2$ | F | NH-methyl |
| H | acyl | $NH_2$ | F | NH-ethyl |
| H | acyl | $NH_2$ | F | NH-acetyl |
| H | acyl | $NH_2$ | F | OH |
| H | acyl | $NH_2$ | F | OMe |
| H | acyl | $NH_2$ | F | OEt |
| H | acyl | $NH_2$ | F | O-cyclopropyl |
| H | acyl | $NH_2$ | F | O-acetyl |
| H | acyl | $NH_2$ | F | SH |
| H | acyl | $NH_2$ | F | SMe |
| H | acyl | $NH_2$ | F | SEt |
| H | acyl | $NH_2$ | F | S-cyclopropyl |
| H | acyl | $NH_2$ | F | F |
| H | acyl | $NH_2$ | F | Cl |
| H | acyl | $NH_2$ | F | Br |
| H | acyl | $NH_2$ | F | I |
| H | amino acid | $NH_2$ | F | H |
| H | amino acid | $NH_2$ | F | $NH_2$ |
| H | amino acid | $NH_2$ | F | NH-cyclopropyl |
| H | amino acid | $NH_2$ | F | NH-methyl |
| H | amino acid | $NH_2$ | F | NH-ethyl |
| H | amino acid | $NH_2$ | F | NH-acetyl |
| H | amino acid | $NH_2$ | F | OH |
| H | amino acid | $NH_2$ | F | OMe |
| H | amino acid | $NH_2$ | F | OEt |
| H | amino acid | $NH_2$ | F | O-cyclopropyl |
| H | amino acid | $NH_2$ | F | O-acetyl |
| H | amino acid | $NH_2$ | F | SH |
| H | amino acid | $NH_2$ | F | SMe |
| H | amino acid | $NH_2$ | F | SEt |
| H | amino acid | $NH_2$ | F | S-cyclopropyl |
| H | amino acid | $NH_2$ | F | F |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | $NH_2$ | F | Cl |
| H | amino acid | $NH_2$ | F | Br |
| H | amino acid | $NH_2$ | F | I |
| amino acid | amino acid | $NH_2$ | F | H |
| amino acid | amino acid | $NH_2$ | F | $NH_2$ |
| amino acid | amino acid | $NH_2$ | F | NH-cyclopropyl |
| amino acid | amino acid | $NH_2$ | F | NH-methyl |
| amino acid | amino acid | $NH_2$ | F | NH-ethyl |
| amino acid | amino acid | $NH_2$ | F | NH-acetyl |
| amino acid | amino acid | $NH_2$ | F | OH |
| amino acid | amino acid | $NH_2$ | F | OMe |
| amino acid | amino acid | $NH_2$ | F | OEt |
| amino acid | amino acid | $NH_2$ | F | O-cyclopropyl |
| amino acid | amino acid | $NH_2$ | F | O-acetyl |
| amino acid | amino acid | $NH_2$ | F | SH |
| amino acid | amino acid | $NH_2$ | F | SMe |
| amino acid | amino acid | $NH_2$ | F | SEt |
| amino acid | amino acid | $NH_2$ | F | S-cyclopropyl |
| amino acid | amino acid | $NH_2$ | F | F |
| amino acid | amino acid | $NH_2$ | F | Cl |
| amino acid | amino acid | $NH_2$ | F | Br |
| amino acid | amino acid | $NH_2$ | F | I |
| amino acid | H | $NH_2$ | F | H |
| amino acid | H | $NH_2$ | F | $NH_2$ |
| amino acid | H | $NH_2$ | F | NH-cyclopropyl |
| amino acid | H | $NH_2$ | F | NH-methyl |
| amino acid | H | $NH_2$ | F | NH-ethyl |
| amino acid | H | $NH_2$ | F | NH-acetyl |
| amino acid | H | $NH_2$ | F | OH |
| amino acid | H | $NH_2$ | F | OMe |
| amino acid | H | $NH_2$ | F | OEt |
| amino acid | H | $NH_2$ | F | O-cyclopropyl |
| amino acid | H | $NH_2$ | F | O-acetyl |
| amino acid | H | $NH_2$ | F | SH |
| amino acid | H | $NH_2$ | F | SMe |
| amino acid | H | $NH_2$ | F | SEt |
| amino acid | H | $NH_2$ | F | S-cyclopropyl |
| amino acid | H | $NH_2$ | F | F |
| amino acid | H | $NH_2$ | F | Cl |
| amino acid | H | $NH_2$ | F | Br |
| amino acid | H | $NH_2$ | F | I |
| amino acid | acyl | $NH_2$ | F | H |
| amino acid | acyl | $NH_2$ | F | $NH_2$ |
| amino acid | acyl | $NH_2$ | F | NH-cyclopropyl |
| amino acid | acyl | $NH_2$ | F | NH-methyl |
| amino acid | acyl | $NH_2$ | F | NH-ethyl |
| amino acid | acyl | $NH_2$ | F | NH-acetyl |
| amino acid | acyl | $NH_2$ | F | OH |
| amino acid | acyl | $NH_2$ | F | OMe |
| amino acid | acyl | $NH_2$ | F | OEt |
| amino acid | acyl | $NH_2$ | F | O-cyclopropyl |
| amino acid | acyl | $NH_2$ | F | O-acetyl |
| amino acid | acyl | $NH_2$ | F | SH |
| amino acid | acyl | $NH_2$ | F | SMe |
| amino acid | acyl | $NH_2$ | F | SEt |
| amino acid | acyl | $NH_2$ | F | S-cyclopropyl |
| amino acid | acyl | $NH_2$ | F | F |
| amino acid | acyl | $NH_2$ | F | Cl |
| amino acid | acyl | $NH_2$ | F | Br |
| amino acid | acyl | $NH_2$ | F | I |
| acyl | H | SH | F | H |
| acyl | H | SH | F | $NH_2$ |
| acyl | H | SH | F | NH-cyclopropyl |
| acyl | H | SH | F | NH-methyl |
| acyl | H | SH | F | NH-ethyl |
| acyl | H | SH | F | NH-acetyl |
| acyl | H | SH | F | OH |
| acyl | H | SH | F | OMe |
| acyl | H | SH | F | OEt |
| acyl | H | SH | F | O-cyclopropyl |
| acyl | H | SH | F | O-acetyl |
| acyl | H | SH | F | SH |
| acyl | H | SH | F | SMe |
| acyl | H | SH | F | SEt |
| acyl | H | SH | F | S-cyclopropyl |
| acyl | H | SH | F | F |
| acyl | H | SH | F | Cl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | SH | F | Br |
| acyl | H | SH | F | I |
| acyl | acyl | SH | F | H |
| acyl | acyl | SH | F | $NH_2$ |
| acyl | acyl | SH | F | NH-cyclopropyl |
| acyl | acyl | SH | F | NH-methyl |
| acyl | acyl | SH | F | NH-ethyl |
| acyl | acyl | SH | F | NH-acetyl |
| acyl | acyl | SH | F | OH |
| acyl | acyl | SH | F | OMe |
| acyl | acyl | SH | F | OEt |
| acyl | acyl | SH | F | O-cyclopropyl |
| acyl | acyl | SH | F | O-acetyl |
| acyl | acyl | SH | F | SH |
| acyl | acyl | SH | F | SMe |
| acyl | acyl | SH | F | SEt |
| acyl | acyl | SH | F | S-cyclopropyl |
| acyl | acyl | SH | F | F |
| acyl | acyl | SH | F | Cl |
| acyl | acyl | SH | F | Br |
| acyl | acyl | SH | F | I |
| acyl | amino acid | SH | F | H |
| acyl | amino acid | SH | F | $NH_2$ |
| acyl | amino acid | SH | F | NH-cyclopropyl |
| acyl | amino acid | SH | F | NH-methyl |
| acyl | amino acid | SH | F | NH-ethyl |
| acyl | amino acid | SH | F | NH-acetyl |
| acyl | amino acid | SH | F | OH |
| acyl | amino acid | SH | F | OMe |
| acyl | amino acid | SH | F | OEt |
| acyl | amino acid | SH | F | O-cyclopropyl |
| acyl | amino acid | SH | F | O-acetyl |
| acyl | amino acid | SH | F | SH |
| acyl | amino acid | SH | F | SMe |
| acyl | amino acid | SH | F | SEt |
| acyl | amino acid | SH | F | S-cyclopropyl |
| acyl | amino acid | SH | F | F |
| acyl | amino acid | SH | F | Cl |
| acyl | amino acid | SH | F | Br |
| acyl | amino acid | SH | F | I |
| H | acyl | SH | F | H |
| H | acyl | SH | F | $NH_2$ |
| H | acyl | SH | F | NH-cyclopropyl |
| H | acyl | SH | F | NH-methyl |
| H | acyl | SH | F | NH-ethyl |
| H | acyl | SH | F | NH-acetyl |
| H | acyl | SH | F | OH |
| H | acyl | SH | F | OMe |
| H | acyl | SH | F | OEt |
| H | acyl | SH | F | O-cyclopropyl |
| H | acyl | SH | F | O-acetyl |
| H | acyl | SH | F | SH |
| H | acyl | SH | F | SMe |
| H | acyl | SH | F | SEt |
| H | acyl | SH | F | S-cyclopropyl |
| H | acyl | SH | F | F |
| H | acyl | SH | F | Cl |
| H | acyl | SH | F | Br |
| H | acyl | SH | F | I |
| H | amino acid | SH | F | H |
| H | amino acid | SH | F | $NH_2$ |
| H | amino acid | SH | F | NH-cyclopropyl |
| H | amino acid | SH | F | NH-methyl |
| H | amino acid | SH | F | NH-ethyl |
| H | amino acid | SH | F | NH-acetyl |
| H | amino acid | SH | F | OH |
| H | amino acid | SH | F | OMe |
| H | amino acid | SH | F | OEt |
| H | amino acid | SH | F | O-cyclopropyl |
| H | amino acid | SH | F | O-acetyl |
| H | amino acid | SH | F | SH |
| H | amino acid | SH | F | SMe |
| H | amino acid | SH | F | SEt |
| H | amino acid | SH | F | S-cyclopropyl |
| H | amino acid | SH | F | F |
| H | amino acid | SH | F | Cl |
| H | amino acid | SH | F | Br |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | SH | F | I |
| amino acid | amino acid | SH | F | H |
| amino acid | amino acid | SH | F | $NH_2$ |
| amino acid | amino acid | SH | F | NH-cyclopropyl |
| amino acid | amino acid | SH | F | NH-methyl |
| amino acid | amino acid | SH | F | NH-ethyl |
| amino acid | amino acid | SH | F | NH-acetyl |
| amino acid | amino acid | SH | F | OH |
| amino acid | amino acid | SH | F | OMe |
| amino acid | amino acid | SH | F | OEt |
| amino acid | amino acid | SH | F | O-cyclopropyl |
| amino acid | amino acid | SH | F | O-acetyl |
| amino acid | amino acid | SH | F | SH |
| amino acid | amino acid | SH | F | SMe |
| amino acid | amino acid | SH | F | SEt |
| amino acid | amino acid | SH | F | S-cyclopropyl |
| amino acid | amino acid | SH | F | F |
| amino acid | amino acid | SH | F | Cl |
| amino acid | amino acid | SH | F | Br |
| amino acid | amino acid | SH | F | I |
| amino acid | H | SH | F | H |
| amino acid | H | SH | F | $NH_2$ |
| amino acid | H | SH | F | NH-cyclopropyl |
| amino acid | H | SH | F | NH-methyl |
| amino acid | H | SH | F | NH-ethyl |
| amino acid | H | SH | F | NH-acetyl |
| amino acid | H | SH | F | OH |
| amino acid | H | SH | F | OMe |
| amino acid | H | SH | F | OEt |
| amino acid | H | SH | F | O-cyclopropyl |
| amino acid | H | SH | F | O-acetyl |
| amino acid | H | SH | F | SH |
| amino acid | H | SH | F | SMe |
| amino acid | H | SH | F | SEt |
| amino acid | H | SH | F | S-cyclopropyl |
| amino acid | H | SH | F | F |
| amino acid | H | SH | F | Cl |
| amino acid | H | SH | F | Br |
| amino acid | H | SH | F | I |
| amino acid | acyl | SH | F | H |
| amino acid | acyl | SH | F | $NH_2$ |
| amino acid | acyl | SH | F | NH-cyclopropyl |
| amino acid | acyl | SH | F | NH-methyl |
| amino acid | acyl | SH | F | NH-ethyl |
| amino acid | acyl | SH | F | NH-acetyl |
| amino acid | acyl | SH | F | OH |
| amino acid | acyl | SH | F | OMe |
| amino acid | acyl | SH | F | OEt |
| amino acid | acyl | SH | F | O-cyclopropyl |
| amino acid | acyl | SH | F | O-acetyl |
| amino acid | acyl | SH | F | SH |
| amino acid | acyl | SH | F | SMe |
| amino acid | acyl | SH | F | SEt |
| amino acid | acyl | SH | F | S-cyclopropyl |
| amino acid | acyl | SH | F | F |
| amino acid | acyl | SH | F | Cl |
| amino acid | acyl | SH | F | Br |
| amino acid | acyl | SH | F | I |
| acyl | H | OH | F | H |
| acyl | H | OH | F | $NH_2$ |
| acyl | H | OH | F | NH-cyclopropyl |
| acyl | H | OH | F | NH-methyl |
| acyl | H | OH | F | NH-ethyl |
| acyl | H | OH | F | NH-acetyl |
| acyl | H | OH | F | OH |
| acyl | H | OH | F | OMe |
| acyl | H | OH | F | OEt |
| acyl | H | OH | F | O-cyclopropyl |
| acyl | H | OH | F | O-acetyl |
| acyl | H | OH | F | SH |
| acyl | H | OH | F | SMe |
| acyl | H | OH | F | SEt |
| acyl | H | OH | F | S-cyclopropyl |
| acyl | H | OH | F | F |
| acyl | H | OH | F | Cl |
| acyl | H | OH | F | Br |
| acyl | H | OH | F | I |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | OH | F | H |
| acyl | acyl | OH | F | $NH_2$ |
| acyl | acyl | OH | F | NH-cyclopropyl |
| acyl | acyl | OH | F | NH-methyl |
| acyl | acyl | OH | F | NH-ethyl |
| acyl | acyl | OH | F | NH-acetyl |
| acyl | acyl | OH | F | OH |
| acyl | acyl | OH | F | OMe |
| acyl | acyl | OH | F | OEt |
| acyl | acyl | OH | F | O-cyclopropyl |
| acyl | acyl | OH | F | O-acetyl |
| acyl | acyl | OH | F | SH |
| acyl | acyl | OH | F | SMe |
| acyl | acyl | OH | F | SEt |
| acyl | acyl | OH | F | S-cyclopropyl |
| acyl | acyl | OH | F | F |
| acyl | acyl | OH | F | Cl |
| acyl | acyl | OH | F | Br |
| acyl | acyl | OH | F | I |
| acyl | amino acid | OH | F | H |
| acyl | amino acid | OH | F | $NH_2$ |
| acyl | amino acid | OH | F | NH-cyclopropyl |
| acyl | amino acid | OH | F | NH-methyl |
| acyl | amino acid | OH | F | NH-ethyl |
| acyl | amino acid | OH | F | NH-acetyl |
| acyl | amino acid | OH | F | OH |
| acyl | amino acid | OH | F | OMe |
| acyl | amino acid | OH | F | OEt |
| acyl | amino acid | OH | F | O-cyclopropyl |
| acyl | amino acid | OH | F | O-acetyl |
| acyl | amino acid | OH | F | SH |
| acyl | amino acid | OH | F | SMe |
| acyl | amino acid | OH | F | SEt |
| acyl | amino acid | OH | F | S-cyclopropyl |
| acyl | amino acid | OH | F | F |
| acyl | amino acid | OH | F | Cl |
| acyl | amino acid | OH | F | Br |
| acyl | amino acid | OH | F | I |
| H | acyl | OH | F | H |
| H | acyl | OH | F | $NH_2$ |
| H | acyl | OH | F | NH-cyclopropyl |
| H | acyl | OH | F | NH-methyl |
| H | acyl | OH | F | NH-ethyl |
| H | acyl | OH | F | NH-acetyl |
| H | acyl | OH | F | OH |
| H | acyl | OH | F | OMe |
| H | acyl | OH | F | OEt |
| H | acyl | OH | F | O-cyclopropyl |
| H | acyl | OH | F | O-acetyl |
| H | acyl | OH | F | SH |
| H | acyl | OH | F | SMe |
| H | acyl | OH | F | SEt |
| H | acyl | OH | F | S-cyclopropyl |
| H | acyl | OH | F | F |
| H | acyl | OH | F | Cl |
| H | acyl | OH | F | Br |
| H | acyl | OH | F | I |
| H | amino acid | OH | F | H |
| H | amino acid | OH | F | $NH_2$ |
| H | amino acid | OH | F | NH-cyclopropyl |
| H | amino acid | OH | F | NH-methyl |
| H | amino acid | OH | F | NH-ethyl |
| H | amino acid | OH | F | NH-acetyl |
| H | amino acid | OH | F | OH |
| H | amino acid | OH | F | OMe |
| H | amino acid | OH | F | OEt |
| H | amino acid | OH | F | O-cyclopropyl |
| H | amino acid | OH | F | O-acetyl |
| H | amino acid | OH | F | SH |
| H | amino acid | OH | F | SMe |
| H | amino acid | OH | F | SEt |
| H | amino acid | OH | F | S-cyclopropyl |
| H | amino acid | OH | F | F |
| H | amino acid | OH | F | Cl |
| H | amino acid | OH | F | Br |
| H | amino acid | OH | F | I |
| amino acid | amino acid | OH | F | H |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | OH | F | $NH_2$ |
| amino acid | amino acid | OH | F | NH-cyclopropyl |
| amino acid | amino acid | OH | F | NH-methyl |
| amino acid | amino acid | OH | F | NH-ethyl |
| amino acid | amino acid | OH | F | NH-acetyl |
| amino acid | amino acid | OH | F | OH |
| amino acid | amino acid | OH | F | OMe |
| amino acid | amino acid | OH | F | OEt |
| amino acid | amino acid | OH | F | O-cyclopropyl |
| amino acid | amino acid | OH | F | O-acetyl |
| amino acid | amino acid | OH | F | SH |
| amino acid | amino acid | OH | F | SMe |
| amino acid | amino acid | OH | F | SEt |
| amino acid | amino acid | OH | F | S-cyclopropyl |
| amino acid | amino acid | OH | F | F |
| amino acid | amino acid | OH | F | Cl |
| amino acid | amino acid | OH | F | Br |
| amino acid | amino acid | OH | F | I |
| amino acid | H | OH | F | H |
| amino acid | H | OH | F | $NH_2$ |
| amino acid | H | OH | F | NH-cyclopropyl |
| amino acid | H | OH | F | NH-methyl |
| amino acid | H | OH | F | NH-ethyl |
| amino acid | H | OH | F | NH-acetyl |
| amino acid | H | OH | F | OH |
| amino acid | H | OH | F | OMe |
| amino acid | H | OH | F | OEt |
| amino acid | H | OH | F | O-cyclopropyl |
| amino acid | H | OH | F | O-acetyl |
| amino acid | H | OH | F | SH |
| amino acid | H | OH | F | SMe |
| amino acid | H | OH | F | SEt |
| amino acid | H | OH | F | S-cyclopropyl |
| amino acid | H | OH | F | F |
| amino acid | H | OH | F | Cl |
| amino acid | H | OH | F | Br |
| amino acid | H | OH | F | I |
| amino acid | acyl | OH | F | H |
| amino acid | acyl | OH | F | $NH_2$ |
| amino acid | acyl | OH | F | NH-cyclopropyl |
| amino acid | acyl | OH | F | NH-methyl |
| amino acid | acyl | OH | F | NH-ethyl |
| amino acid | acyl | OH | F | NH-acetyl |
| amino acid | acyl | OH | F | OH |
| amino acid | acyl | OH | F | OMe |
| amino acid | acyl | OH | F | OEt |
| amino acid | acyl | OH | F | O-cyclopropyl |
| amino acid | acyl | OH | F | O-acetyl |
| amino acid | acyl | OH | F | SH |
| amino acid | acyl | OH | F | SMe |
| amino acid | acyl | OH | F | SEt |
| amino acid | acyl | OH | F | S-cyclopropyl |
| amino acid | acyl | OH | F | F |
| amino acid | acyl | OH | F | Cl |
| amino acid | acyl | OH | F | Br |
| amino acid | acyl | OH | F | I |
| acyl | H | $CH_3$ | $NH_2$ | H |
| acyl | H | $CH_3$ | $NH_2$ | $NH_2$ |
| acyl | H | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| acyl | H | $CH_3$ | $NH_2$ | NH-methyl |
| acyl | H | $CH_3$ | $NH_2$ | NH-ethyl |
| acyl | H | $CH_3$ | $NH_2$ | NH-acetyl |
| acyl | H | $CH_3$ | $NH_2$ | OH |
| acyl | H | $CH_3$ | $NH_2$ | OMe |
| acyl | H | $CH_3$ | $NH_2$ | OEt |
| acyl | H | $CH_3$ | $NH_2$ | O-cyclopropyl |
| acyl | H | $CH_3$ | $NH_2$ | O-acetyl |
| acyl | H | $CH_3$ | $NH_2$ | SH |
| acyl | H | $CH_3$ | $NH_2$ | SMe |
| acyl | H | $CH_3$ | $NH_2$ | SEt |
| acyl | H | $CH_3$ | $NH_2$ | S-cyclopropyl |
| acyl | H | $CH_3$ | $NH_2$ | F |
| acyl | H | $CH_3$ | $NH_2$ | Cl |
| acyl | H | $CH_3$ | $NH_2$ | Br |
| acyl | H | $CH_3$ | $NH_2$ | I |
| acyl | acyl | $CH_3$ | $NH_2$ | H |
| acyl | acyl | $CH_3$ | $NH_2$ | $NH_2$ |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | $CH_3$ | $NH_2$ | NH-methyl |
| acyl | acyl | $CH_3$ | $NH_2$ | NH-ethyl |
| acyl | acyl | $CH_3$ | $NH_2$ | NH-acetyl |
| acyl | acyl | $CH_3$ | $NH_2$ | OH |
| acyl | acyl | $CH_3$ | $NH_2$ | OMe |
| acyl | acyl | $CH_3$ | $NH_2$ | OEt |
| acyl | acyl | $CH_3$ | $NH_2$ | O-cyclopropyl |
| acyl | acyl | $CH_3$ | $NH_2$ | O-acetyl |
| acyl | acyl | $CH_3$ | $NH_2$ | SH |
| acyl | acyl | $CH_3$ | $NH_2$ | SMe |
| acyl | acyl | $CH_3$ | $NH_2$ | SEt |
| acyl | acyl | $CH_3$ | $NH_2$ | S-cyclopropyl |
| acyl | acyl | $CH_3$ | $NH_2$ | F |
| acyl | acyl | $CH_3$ | $NH_2$ | Cl |
| acyl | acyl | $CH_3$ | $NH_2$ | Br |
| acyl | acyl | $CH_3$ | $NH_2$ | I |
| acyl | amino acid | $CH_3$ | $NH_2$ | H |
| acyl | amino acid | $CH_3$ | $NH_2$ | $NH_2$ |
| acyl | amino acid | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | $CH_3$ | $NH_2$ | NH-methyl |
| acyl | amino acid | $CH_3$ | $NH_2$ | NH-ethyl |
| acyl | amino acid | $CH_3$ | $NH_2$ | NH-acetyl |
| acyl | amino acid | $CH_3$ | $NH_2$ | OH |
| acyl | amino acid | $CH_3$ | $NH_2$ | OMe |
| acyl | amino acid | $CH_3$ | $NH_2$ | OEt |
| acyl | amino acid | $CH_3$ | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | $CH_3$ | $NH_2$ | O-acetyl |
| acyl | amino acid | $CH_3$ | $NH_2$ | SH |
| acyl | amino acid | $CH_3$ | $NH_2$ | SMe |
| acyl | amino acid | $CH_3$ | $NH_2$ | SEt |
| acyl | amino acid | $CH_3$ | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | $CH_3$ | $NH_2$ | F |
| acyl | amino acid | $CH_3$ | $NH_2$ | Cl |
| acyl | amino acid | $CH_3$ | $NH_2$ | Br |
| acyl | amino acid | $CH_3$ | $NH_2$ | I |
| H | acyl | $CH_3$ | $NH_2$ | H |
| H | acyl | $CH_3$ | $NH_2$ | $NH_2$ |
| H | acyl | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| H | acyl | $CH_3$ | $NH_2$ | NH-methyl |
| H | acyl | $CH_3$ | $NH_2$ | NH-ethyl |
| H | acyl | $CH_3$ | $NH_2$ | NH-acetyl |
| H | acyl | $CH_3$ | $NH_2$ | OH |
| H | acyl | $CH_3$ | $NH_2$ | OMe |
| H | acyl | $CH_3$ | $NH_2$ | OEt |
| H | acyl | $CH_3$ | $NH_2$ | O-cyclopropyl |
| H | acyl | $CH_3$ | $NH_2$ | O-acetyl |
| H | acyl | $CH_3$ | $NH_2$ | SH |
| H | acyl | $CH_3$ | $NH_2$ | SMe |
| H | acyl | $CH_3$ | $NH_2$ | SEt |
| H | acyl | $CH_3$ | $NH_2$ | S-cyclopropyl |
| H | acyl | $CH_3$ | $NH_2$ | F |
| H | acyl | $CH_3$ | $NH_2$ | Cl |
| H | acyl | $CH_3$ | $NH_2$ | Br |
| H | acyl | $CH_3$ | $NH_2$ | I |
| H | amino acid | $CH_3$ | $NH_2$ | H |
| H | amino acid | $CH_3$ | $NH_2$ | $NH_2$ |
| H | amino acid | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| H | amino acid | $CH_3$ | $NH_2$ | NH-methyl |
| H | amino acid | $CH_3$ | $NH_2$ | NH-ethyl |
| H | amino acid | $CH_3$ | $NH_2$ | NH-acetyl |
| H | amino acid | $CH_3$ | $NH_2$ | OH |
| H | amino acid | $CH_3$ | $NH_2$ | OMe |
| H | amino acid | $CH_3$ | $NH_2$ | OEt |
| H | amino acid | $CH_3$ | $NH_2$ | O-cyclopropyl |
| H | amino acid | $CH_3$ | $NH_2$ | O-acetyl |
| H | amino acid | $CH_3$ | $NH_2$ | SI |
| H | amino acid | $CH_3$ | $NH_2$ | SMe |
| H | amino acid | $CH_3$ | $NH_2$ | SEt |
| H | amino acid | $CH_3$ | $NH_2$ | S-cyclopropyl |
| H | amino acid | $CH_3$ | $NH_2$ | F |
| H | amino acid | $CH_3$ | $NH_2$ | Cl |
| H | amino acid | $CH_3$ | $NH_2$ | Br |
| H | amino acid | $CH_3$ | $NH_2$ | I |
| amino acid | amino acid | $CH_3$ | $NH_2$ | H |
| amino acid | amino acid | $CH_3$ | $NH_2$ | $NH_2$ |
| amino acid | amino acid | $CH_3$ | $NH_2$ | NH-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | $CH_3$ | $NH_2$ | NH-methyl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | NH-ethyl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | NH-acetyl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | OH |
| amino acid | amino acid | $CH_3$ | $NH_2$ | OMe |
| amino acid | amino acid | $CH_3$ | $NH_2$ | OEt |
| amino acid | amino acid | $CH_3$ | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | O-acetyl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | SH |
| amino acid | amino acid | $CH_3$ | $NH_2$ | SMe |
| amino acid | amino acid | $CH_3$ | $NH_2$ | SEt |
| amino acid | amino acid | $CH_3$ | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | F |
| amino acid | amino acid | $CH_3$ | $NH_2$ | Cl |
| amino acid | amino acid | $CH_3$ | $NH_2$ | Br |
| amino acid | amino acid | $CH_3$ | $NH_2$ | I |
| amino acid | H | $CH_3$ | $NH_2$ | H |
| amino acid | H | $CH_3$ | $NH_2$ | $NH_2$ |
| amino acid | H | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| amino acid | H | $CH_3$ | $NH_2$ | NH-methyl |
| amino acid | H | $CH_3$ | $NH_2$ | NH-ethyl |
| amino acid | H | $CH_3$ | $NH_2$ | NH-acetyl |
| amino acid | H | $CH_3$ | $NH_2$ | OH |
| amino acid | H | $CH_3$ | $NH_2$ | OMe |
| amino acid | H | $CH_3$ | $NH_2$ | OEt |
| amino acid | H | $CH_3$ | $NH_2$ | O-cyclopropyl |
| amino acid | H | $CH_3$ | $NH_2$ | O-acetyl |
| amino acid | H | $CH_3$ | $NH_2$ | SH |
| amino acid | H | $CH_3$ | $NH_2$ | SMe |
| amino acid | H | $CH_3$ | $NH_2$ | SEt |
| amino acid | H | $CH_3$ | $NH_2$ | S-cyclopropyl |
| amino acid | H | $CH_3$ | $NH_2$ | F |
| amino acid | H | $CH_3$ | $NH_2$ | Cl |
| amino acid | H | $CH_3$ | $NH_2$ | Br |
| amino acid | H | $CH_3$ | $NH_2$ | I |
| amino acid | acyl | $CH_3$ | $NH_2$ | H |
| amino acid | acyl | $CH_3$ | $NH_2$ | $NH_2$ |
| amino acid | acyl | $CH_3$ | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | $CH_3$ | $NH_2$ | NH-methyl |
| amino acid | acyl | $CH_3$ | $NH_2$ | NH-ethyl |
| amino acid | acyl | $CH_3$ | $NH_2$ | NH-acetyl |
| amino acid | acyl | $CH_3$ | $NH_2$ | OH |
| amino acid | acyl | $CH_3$ | $NH_2$ | OMe |
| amino acid | acyl | $CH_3$ | $NH_2$ | OEt |
| amino acid | acyl | $CH_3$ | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | $CH_3$ | $NH_2$ | O-acetyl |
| amino acid | acyl | $CH_3$ | $NH_2$ | SH |
| amino acid | acyl | $CH_3$ | $NH_2$ | SMe |
| amino acid | acyl | $CH_3$ | $NH_2$ | SEt |
| amino acid | acyl | $CH_3$ | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | $CH_3$ | $NH_2$ | F |
| amino acid | acyl | $CH_3$ | $NH_2$ | Cl |
| amino acid | acyl | $CH_3$ | $NH_2$ | Br |
| amino acid | acyl | $CH_3$ | $NH_2$ | I |
| acyl | H | $CF_3$ | $NH_2$ | H |
| acyl | H | $CF_3$ | $NH_2$ | $NH_2$ |
| acyl | H | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| acyl | H | $CF_3$ | $NH_2$ | NH-methyl |
| acyl | H | $CF_3$ | $NH_2$ | NH-ethyl |
| acyl | H | $CF_3$ | $NH_2$ | NH-acetyl |
| acyl | H | $CF_3$ | $NH_2$ | OH |
| acyl | H | $CF_3$ | $NH_2$ | OMe |
| acyl | H | $CF_3$ | $NH_2$ | OEt |
| acyl | H | $CF_3$ | $NH_2$ | O-cyclopropyl |
| acyl | H | $CF_3$ | $NH_2$ | O-acetyl |
| acyl | H | $CF_3$ | $NH_2$ | SH |
| acyl | H | $CF_3$ | $NH_2$ | SMe |
| acyl | H | $CF_3$ | $NH_2$ | SEt |
| acyl | H | $CF_3$ | $NH_2$ | S-cyclopropyl |
| acyl | H | $CF_3$ | $NH_2$ | F |
| acyl | H | $CF_3$ | $NH_2$ | Cl |
| acyl | H | $CF_3$ | $NH_2$ | Br |
| acyl | H | $CF_3$ | $NH_2$ | I |
| acyl | acyl | $CF_3$ | $NH_2$ | H |
| acyl | acyl | $CF_3$ | $NH_2$ | $NH_2$ |
| acyl | acyl | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | $CF_3$ | $NH_2$ | NH-methyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | $CF_3$ | $NH_2$ | NH-ethyl |
| acyl | acyl | $CF_3$ | $NH_2$ | NH-acetyl |
| acyl | acyl | $CF_3$ | $NH_2$ | OH |
| acyl | acyl | $CF_3$ | $NH_2$ | OMe |
| acyl | acyl | $CF_3$ | $NH_2$ | OEt |
| acyl | acyl | $CF_3$ | $NH_2$ | O-cyclopropyl |
| acyl | acyl | $CF_3$ | $NH_2$ | O-acetyl |
| acyl | acyl | $CF_3$ | $NH_2$ | SH |
| acyl | acyl | $CF_3$ | $NH_2$ | SMe |
| acyl | acyl | $CF_3$ | $NH_2$ | SEt |
| acyl | acyl | $CF_3$ | $NH_2$ | S-cyclopropyl |
| acyl | acyl | $CF_3$ | $NH_2$ | F |
| acyl | acyl | $CF_3$ | $NH_2$ | Cl |
| acyl | acyl | $CF_3$ | $NH_2$ | Br |
| acyl | acyl | $CF_3$ | $NH_2$ | I |
| acyl | amino acid | $CF_3$ | $NH_2$ | H |
| acyl | amino acid | $CF_3$ | $NH_2$ | $NH_2$ |
| acyl | amino acid | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | $CF_3$ | $NH_2$ | NH-methyl |
| acyl | amino acid | $CF_3$ | $NH_2$ | NH-ethyl |
| acyl | amino acid | $CF_3$ | $NH_2$ | NH-acetyl |
| acyl | amino acid | $CF_3$ | $NH_2$ | OH |
| acyl | amino acid | $CF_3$ | $NH_2$ | OMe |
| acyl | amino acid | $CF_3$ | $NH_2$ | OEt |
| acyl | amino acid | $CF_3$ | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | $CF_3$ | $NH_2$ | O-acetyl |
| acyl | amino acid | $CF_3$ | $NH_2$ | SH |
| acyl | amino acid | $CF_3$ | $NH_2$ | SMe |
| acyl | amino acid | $CF_3$ | $NH_2$ | SEt |
| acyl | amino acid | $CF_3$ | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | $CF_3$ | $NH_2$ | F |
| acyl | amino acid | $CF_3$ | $NH_2$ | Cl |
| acyl | amino acid | $CF_3$ | $NH_2$ | Br |
| acyl | amino acid | $CF_3$ | $NH_2$ | I |
| H | acyl | $CF_3$ | $NH_2$ | H |
| H | acyl | $CF_3$ | $NH_2$ | $NH_2$ |
| H | acyl | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| H | acyl | $CF_3$ | $NH_2$ | NH-methyl |
| H | acyl | $CF_3$ | $NH_2$ | NH-ethyl |
| H | acyl | $CF_3$ | $NH_2$ | NH-acetyl |
| H | acyl | $CF_3$ | $NH_2$ | OH |
| H | acyl | $CF_3$ | $NH_2$ | OMe |
| H | acyl | $CF_3$ | $NH_2$ | OEt |
| H | acyl | $CF_3$ | $NH_2$ | O-cyclopropyl |
| H | acyl | $CF_3$ | $NH_2$ | O-acetyl |
| H | acyl | $CF_3$ | $NH_2$ | SH |
| H | acyl | $CF_3$ | $NH_2$ | SMe |
| H | acyl | $CF_3$ | $NH_2$ | SEt |
| H | acyl | $CF_3$ | $NH_2$ | S-cyclopropyl |
| H | acyl | $CF_3$ | $NH_2$ | F |
| H | acyl | $CF_3$ | $NH_2$ | Cl |
| H | acyl | $CF_3$ | $NH_2$ | Br |
| H | acyl | $CF_3$ | $NH_2$ | I |
| H | amino acid | $CF_3$ | $NH_2$ | H |
| H | amino acid | $CF_3$ | $NH_2$ | $NH_2$ |
| H | amino acid | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| H | amino acid | $CF_3$ | $NH_2$ | NH-methyl |
| H | amino acid | $CF_3$ | $NH_2$ | NH-ethyl |
| H | amino acid | $CF_3$ | $NH_2$ | NH-acetyl |
| H | amino acid | $CF_3$ | $NH_2$ | OH |
| H | amino acid | $CF_3$ | $NH_2$ | OMe |
| H | amino acid | $CF_3$ | $NH_2$ | OEt |
| H | amino acid | $CF_3$ | $NH_2$ | O-cyclopropyl |
| H | amino acid | $CF_3$ | $NH_2$ | O-acetyl |
| H | amino acid | $CF_3$ | $NH_2$ | SH |
| H | amino acid | $CF_3$ | $NH_2$ | SMe |
| H | amino acid | $CF_3$ | $NH_2$ | SEt |
| H | amino acid | $CF_3$ | $NH_2$ | S-cyclopropyl |
| H | amino acid | $CF_3$ | $NH_2$ | F |
| H | amino acid | $CF_3$ | $NH_2$ | Cl |
| H | amino acid | $CF_3$ | $NH_2$ | Br |
| H | amino acid | $CF_3$ | $NH_2$ | I |
| amino acid | amino acid | $CF_3$ | $NH_2$ | H |
| amino acid | amino acid | $CF_3$ | $NH_2$ | $NH_2$ |
| amino acid | amino acid | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | NH-methyl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | NH-ethyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | $CF_3$ | $NH_2$ | NH-acetyl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | OH |
| amino acid | amino acid | $CF_3$ | $NH_2$ | OMe |
| amino acid | amino acid | $CF_3$ | $NH_2$ | OEt |
| amino acid | amino acid | $CF_3$ | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | O-acetyl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | SH |
| amino acid | amino acid | $CF_3$ | $NH_2$ | SMe |
| amino acid | amino acid | $CF_3$ | $NH_2$ | SEt |
| amino acid | amino acid | $CF_3$ | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | F |
| amino acid | amino acid | $CF_3$ | $NH_2$ | Cl |
| amino acid | amino acid | $CF_3$ | $NH_2$ | Br |
| amino acid | amino acid | $CF_3$ | $NH_2$ | I |
| amino acid | H | $CF_3$ | $NH_2$ | H |
| amino acid | H | $CF_3$ | $NH_2$ | $NH_2$ |
| amino acid | H | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| amino acid | H | $CF_3$ | $NH_2$ | NH-methyl |
| amino acid | H | $CF_3$ | $NH_2$ | NH-ethyl |
| amino acid | H | $CF_3$ | $NH_2$ | NH-acetyl |
| amino acid | H | $CF_3$ | $NH_2$ | OH |
| amino acid | H | $CF_3$ | $NH_2$ | OMe |
| amino acid | H | $CF_3$ | $NH_2$ | OEt |
| amino acid | H | $CF_3$ | $NH_2$ | O-cyclopropyl |
| amino acid | H | $CF_3$ | $NH_2$ | O-acetyl |
| amino acid | H | $CF_3$ | $NH_2$ | SH |
| amino acid | H | $CF_3$ | $NH_2$ | SMe |
| amino acid | H | $CF_3$ | $NH_2$ | SEt |
| amino acid | H | $CF_3$ | $NH_2$ | S-cyclopropyl |
| amino acid | H | $CF_3$ | $NH_2$ | F |
| amino acid | H | $CF_3$ | $NH_2$ | Cl |
| amino acid | H | $CF_3$ | $NH_2$ | Br |
| amino acid | H | $CF_3$ | $NH_2$ | I |
| amino acid | acyl | $CF_3$ | $NH_2$ | H |
| amino acid | acyl | $CF_3$ | $NH_2$ | $NH_2$ |
| amino acid | acyl | $CF_3$ | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | $CF_3$ | $NH_2$ | NH-methyl |
| amino acid | acyl | $CF_3$ | $NH_2$ | NH-ethyl |
| amino acid | acyl | $CF_3$ | $NH_2$ | NH-acetyl |
| amino acid | acyl | $CF_3$ | $NH_2$ | OH |
| amino acid | acyl | $CF_3$ | $NH_2$ | OMe |
| amino acid | acyl | $CF_3$ | $NH_2$ | OEt |
| amino acid | acyl | $CF_3$ | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | $CF_3$ | $NH_2$ | O-acetyl |
| amino acid | acyl | $CF_3$ | $NH_2$ | SH |
| amino acid | acyl | $CF_3$ | $NH_2$ | SMe |
| amino acid | acyl | $CF_3$ | $NH_2$ | SEt |
| amino acid | acyl | $CF_3$ | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | $CF_3$ | $NH_2$ | F |
| amino acid | acyl | $CF_3$ | $NH_2$ | Cl |
| amino acid | acyl | $CF_3$ | $NH_2$ | Br |
| amino acid | acyl | $CF_3$ | $NH_2$ | I |
| acyl | H | Br | $NH_2$ | H |
| acyl | H | Br | $NH_2$ | $NH_2$ |
| acyl | H | Br | $NH_2$ | NH-cyclopropyl |
| acyl | H | Br | $NH_2$ | NH-methyl |
| acyl | H | Br | $NH_2$ | NH-ethyl |
| acyl | H | Br | $NH_2$ | NH-acetyl |
| acyl | H | Br | $NH_2$ | OH |
| acyl | H | Br | $NH_2$ | OMe |
| acyl | H | Br | $NH_2$ | OEt |
| acyl | H | Br | $NH_2$ | O-cyclopropyl |
| acyl | H | Br | $NH_2$ | O-acetyl |
| acyl | H | Br | $NH_2$ | SH |
| acyl | H | Br | $NH_2$ | SMe |
| acyl | H | Br | $NH_2$ | SEt |
| acyl | H | Br | $NH_2$ | S-cyclopropyl |
| acyl | H | Br | $NH_2$ | F |
| acyl | H | Br | $NH_2$ | Cl |
| acyl | H | Br | $NH_2$ | Br |
| acyl | H | Br | $NH_2$ | I |
| acyl | acyl | Br | $NH_2$ | H |
| acyl | acyl | Br | $NH_2$ | $NH_2$ |
| acyl | acyl | Br | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | Br | $NH_2$ | NH-methyl |
| acyl | acyl | Br | $NH_2$ | NH-ethyl |
| acyl | acyl | Br | $NH_2$ | NH-acetyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | Br | $NH_2$ | OH |
| acyl | acyl | Br | $NH_2$ | OMe |
| acyl | acyl | Br | $NH_2$ | OEt |
| acyl | acyl | Br | $NH_2$ | O-cyclopropyl |
| acyl | acyl | Br | $NH_2$ | O-acetyl |
| acyl | acyl | Br | $NH_2$ | SH |
| acyl | acyl | Br | $NH_2$ | SMe |
| acyl | acyl | Br | $NH_2$ | SEt |
| acyl | acyl | Br | $NH_2$ | S-cyclopropyl |
| acyl | acyl | Br | $NH_2$ | F |
| acyl | acyl | Br | $NH_2$ | Cl |
| acyl | acyl | Br | $NH_2$ | Br |
| acyl | acyl | Br | $NH_2$ | I |
| acyl | amino acid | Br | $NH_2$ | H |
| acyl | amino acid | Br | $NH_2$ | $NH_2$ |
| acyl | amino acid | Br | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | Br | $NH_2$ | NH-methyl |
| acyl | amino acid | Br | $NH_2$ | NH-ethyl |
| acyl | amino acid | Br | $NH_2$ | NH-acetyl |
| acyl | amino acid | Br | $NH_2$ | OH |
| acyl | amino acid | Br | $NH_2$ | OMe |
| acyl | amino acid | Br | $NH_2$ | OEt |
| acyl | amino acid | Br | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | Br | $NH_2$ | O-acetyl |
| acyl | amino acid | Br | $NH_2$ | SH |
| acyl | amino acid | Br | $NH_2$ | SMe |
| acyl | amino acid | Br | $NH_2$ | SEt |
| acyl | amino acid | Br | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | Br | $NH_2$ | F |
| acyl | amino acid | Br | $NH_2$ | Cl |
| acyl | amino acid | Br | $NH_2$ | Br |
| acyl | amino acid | Br | $NH_2$ | I |
| H | acyl | Br | $NH_2$ | H |
| H | acyl | Br | $NH_2$ | $NH_2$ |
| H | acyl | Br | $NH_2$ | NH-cyclopropyl |
| H | acyl | Br | $NH_2$ | NH-methyl |
| H | acyl | Br | $NH_2$ | NH-ethyl |
| H | acyl | Br | $NH_2$ | NH-acetyl |
| H | acyl | Br | $NH_2$ | OH |
| H | acyl | Br | $NH_2$ | OMe |
| H | acyl | Br | $NH_2$ | OEt |
| H | acyl | Br | $NH_2$ | O-cyclopropyl |
| H | acyl | Br | $NH_2$ | O-acetyl |
| H | acyl | Br | $NH_2$ | SH |
| H | acyl | Br | $NH_2$ | SMe |
| H | acyl | Br | $NH_2$ | SEt |
| H | acyl | Br | $NH_2$ | S-cyclopropyl |
| H | acyl | Br | $NH_2$ | F |
| H | acyl | Br | $NH_2$ | Cl |
| H | acyl | Br | $NH_2$ | Br |
| H | acyl | Br | $NH_2$ | I |
| H | amino acid | Br | $NH_2$ | H |
| H | amino acid | Br | $NH_2$ | $NH_2$ |
| H | amino acid | Br | $NH_2$ | NH-cyclopropyl |
| H | amino acid | Br | $NH_2$ | NH-methyl |
| H | amino acid | Br | $NH_2$ | NH-ethyl |
| H | amino acid | Br | $NH_2$ | NH-acetyl |
| H | amino acid | Br | $NH_2$ | OH |
| H | amino acid | Br | $NH_2$ | OMe |
| H | amino acid | Br | $NH_2$ | OEt |
| H | amino acid | Br | $NH_2$ | O-cyclopropyl |
| H | amino acid | Br | $NH_2$ | O-acetyl |
| H | amino acid | Br | $NH_2$ | SH |
| H | amino acid | Br | $NH_2$ | SMe |
| H | amino acid | Br | $NH_2$ | SEt |
| H | amino acid | Br | $NH_2$ | S-cyclopropyl |
| H | amino acid | Br | $NH_2$ | F |
| H | amino acid | Br | $NH_2$ | Cl |
| H | amino acid | Br | $NH_2$ | Br |
| H | amino acid | Br | $NH_2$ | I |
| amino acid | amino acid | Br | $NH_2$ | H |
| amino acid | amino acid | Br | $NH_2$ | $NH_2$ |
| amino acid | amino acid | Br | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | Br | $NH_2$ | NH-methyl |
| amino acid | amino acid | Br | $NH_2$ | NH-ethyl |
| amino acid | amino acid | Br | $NH_2$ | NH-acetyl |
| amino acid | amino acid | Br | $NH_2$ | OH |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | Br | $NH_2$ | OMe |
| amino acid | amino acid | Br | $NH_2$ | OEt |
| amino acid | amino acid | Br | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | Br | $NH_2$ | O-acetyl |
| amino acid | amino acid | Br | $NH_2$ | SH |
| amino acid | amino acid | Br | $NH_2$ | SMe |
| amino acid | amino acid | Br | $NH_2$ | SEt |
| amino acid | amino acid | Br | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | Br | $NH_2$ | F |
| amino acid | amino acid | Br | $NH_2$ | Cl |
| amino acid | amino acid | Br | $NH_2$ | Br |
| amino acid | amino acid | Br | $NH_2$ | I |
| amino acid | H | Br | $NH_2$ | H |
| amino acid | H | Br | $NH_2$ | $NH_2$ |
| amino acid | H | Br | $NH_2$ | NH-cyclopropyl |
| amino acid | H | Br | $NH_2$ | NH-methyl |
| amino acid | H | Br | $NH_2$ | NH-ethyl |
| amino acid | H | Br | $NH_2$ | NH-acetyl |
| amino acid | H | Br | $NH_2$ | OH |
| amino acid | H | Br | $NH_2$ | OMe |
| amino acid | H | Br | $NH_2$ | OEt |
| amino acid | H | Br | $NH_2$ | O-cyclopropyl |
| amino acid | H | Br | $NH_2$ | O-acetyl |
| amino acid | H | Br | $NH_2$ | SH |
| amino acid | H | Br | $NH_2$ | SMe |
| amino acid | H | Br | $NH_2$ | SEt |
| amino acid | H | Br | $NH_2$ | S-cyclopropyl |
| amino acid | H | Br | $NH_2$ | F |
| amino acid | H | Br | $NH_2$ | Cl |
| amino acid | H | Br | $NH_2$ | Br |
| amino acid | H | Br | $NH_2$ | I |
| amino acid | acyl | Br | $NH_2$ | H |
| amino acid | acyl | Br | $NH_2$ | $NH_2$ |
| amino acid | acyl | Br | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | Br | $NH_2$ | NH-methyl |
| amino acid | acyl | Br | $NH_2$ | NH-ethyl |
| amino acid | acyl | Br | $NH_2$ | NH-acetyl |
| amino acid | acyl | Br | $NH_2$ | OH |
| amino acid | acyl | Br | $NH_2$ | OMe |
| amino acid | acyl | Br | $NH_2$ | OEt |
| amino acid | acyl | Br | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | Br | $NH_2$ | O-acetyl |
| amino acid | acyl | Br | $NH_2$ | SH |
| amino acid | acyl | Br | $NH_2$ | SMe |
| amino acid | acyl | Br | $NH_2$ | SEt |
| amino acid | acyl | Br | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | Br | $NH_2$ | F |
| amino acid | acyl | Br | $NH_2$ | Cl |
| amino acid | acyl | Br | $NH_2$ | Br |
| amino acid | acyl | Br | $NH_2$ | I |
| acyl | H | Cl | $NH_2$ | H |
| acyl | H | Cl | $NH_2$ | $NH_2$ |
| acyl | H | Cl | $NH_2$ | NH-cyclopropyl |
| acyl | H | Cl | $NH_2$ | NH-methyl |
| acyl | H | Cl | $NH_2$ | NH-ethyl |
| acyl | H | Cl | $NH_2$ | NH-acetyl |
| acyl | H | Cl | $NH_2$ | OH |
| acyl | H | Cl | $NH_2$ | OMe |
| acyl | H | Cl | $NH_2$ | OEt |
| acyl | H | Cl | $NH_2$ | O-cyclopropyl |
| acyl | H | Cl | $NH_2$ | O-acetyl |
| acyl | H | Cl | $NH_2$ | SH |
| acyl | H | Cl | $NH_2$ | SMe |
| acyl | H | Cl | $NH_2$ | SEt |
| acyl | H | Cl | $NH_2$ | S-cyclopropyl |
| acyl | H | Cl | $NH_2$ | F |
| acyl | H | Cl | $NH_2$ | Cl |
| acyl | H | Cl | $NH_2$ | Br |
| acyl | H | Cl | $NH_2$ | I |
| acyl | acyl | Cl | $NH_2$ | H |
| acyl | acyl | Cl | $NH_2$ | $NH_2$ |
| acyl | acyl | Cl | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | Cl | $NH_2$ | NH-methyl |
| acyl | acyl | Cl | $NH_2$ | NH-ethyl |
| acyl | acyl | Cl | $NH_2$ | NH-acetyl |
| acyl | acyl | Cl | $NH_2$ | OH |
| acyl | acyl | Cl | $NH_2$ | OMe |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | Cl | $NH_2$ | OEt |
| acyl | acyl | Cl | $NH_2$ | O-cyclopropyl |
| acyl | acyl | Cl | $NH_2$ | O-acetyl |
| acyl | acyl | Cl | $NH_2$ | SH |
| acyl | acyl | Cl | $NH_2$ | SMe |
| acyl | acyl | Cl | $NH_2$ | SEt |
| acyl | acyl | Cl | $NH_2$ | S-cyclopropyl |
| acyl | acyl | Cl | $NH_2$ | F |
| acyl | acyl | Cl | $NH_2$ | Cl |
| acyl | acyl | Cl | $NH_2$ | Br |
| acyl | acyl | Cl | $NH_2$ | I |
| acyl | amino acid | Cl | $NH_2$ | H |
| acyl | amino acid | Cl | $NH_2$ | $NH_2$ |
| acyl | amino acid | Cl | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | Cl | $NH_2$ | NH-methyl |
| acyl | amino acid | Cl | $NH_2$ | NH-ethyl |
| acyl | amino acid | Cl | $NH_2$ | NH-acetyl |
| acyl | amino acid | Cl | $NH_2$ | OH |
| acyl | amino acid | Cl | $NH_2$ | OMe |
| acyl | amino acid | Cl | $NH_2$ | OEt |
| acyl | amino acid | Cl | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | Cl | $NH_2$ | O-acetyl |
| acyl | amino acid | Cl | $NH_2$ | SH |
| acyl | amino acid | Cl | $NH_2$ | SMe |
| acyl | amino acid | Cl | $NH_2$ | SEt |
| acyl | amino acid | Cl | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | Cl | $NH_2$ | F |
| acyl | amino acid | Cl | $NH_2$ | Cl |
| acyl | amino acid | Cl | $NH_2$ | Br |
| acyl | amino acid | Cl | $NH_2$ | I |
| H | acyl | Cl | $NH_2$ | H |
| H | acyl | Cl | $NH_2$ | $NH_2$ |
| H | acyl | Cl | $NH_2$ | NH-cyclopropyl |
| H | acyl | Cl | $NH_2$ | NH-methyl |
| H | acyl | Cl | $NH_2$ | NH-ethyl |
| H | acyl | Cl | $NH_2$ | NH-acetyl |
| H | acyl | Cl | $NH_2$ | OH |
| H | acyl | Cl | $NH_2$ | OMe |
| H | acyl | Cl | $NH_2$ | OEt |
| H | acyl | Cl | $NH_2$ | O-cyclopropyl |
| H | acyl | Cl | $NH_2$ | O-acetyl |
| H | acyl | Cl | $NH_2$ | SH |
| H | acyl | Cl | $NH_2$ | SMe |
| H | acyl | Cl | $NH_2$ | SEt |
| H | acyl | Cl | $NH_2$ | S-cyclopropyl |
| H | acyl | Cl | $NH_2$ | F |
| H | acyl | Cl | $NH_2$ | Cl |
| H | acyl | Cl | $NH_2$ | Br |
| H | acyl | Cl | $NH_2$ | I |
| H | amino acid | Cl | $NH_2$ | H |
| H | amino acid | Cl | $NH_2$ | $NH_2$ |
| H | amino acid | Cl | $NH_2$ | NH-cyclopropyl |
| H | amino acid | Cl | $NH_2$ | NH-methyl |
| H | amino acid | Cl | $NH_2$ | NH-ethyl |
| H | amino acid | Cl | $NH_2$ | NH-acetyl |
| H | amino acid | Cl | $NH_2$ | OH |
| H | amino acid | Cl | $NH_2$ | OMe |
| H | amino acid | Cl | $NH_2$ | OEt |
| H | amino acid | Cl | $NH_2$ | O-cyclopropyl |
| H | amino acid | Cl | $NH_2$ | O-acetyl |
| H | amino acid | Cl | $NH_2$ | SH |
| H | amino acid | Cl | $NH_2$ | SMe |
| H | amino acid | Cl | $NH_2$ | SEt |
| H | amino acid | Cl | $NH_2$ | S-cyclopropyl |
| H | amino acid | Cl | $NH_2$ | F |
| H | amino acid | Cl | $NH_2$ | Cl |
| H | amino acid | Cl | $NH_2$ | Br |
| H | amino acid | Cl | $NH_2$ | I |
| amino acid | amino acid | Cl | $NH_2$ | H |
| amino acid | amino acid | Cl | $NH_2$ | $NH_2$ |
| amino acid | amino acid | Cl | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | Cl | $NH_2$ | NH-methyl |
| amino acid | amino acid | Cl | $NH_2$ | NH-ethyl |
| amino acid | amino acid | Cl | $NH_2$ | NH-acetyl |
| amino acid | amino acid | Cl | $NH_2$ | OH |
| amino acid | amino acid | Cl | $NH_2$ | OMe |
| amino acid | amino acid | Cl | $NH_2$ | OEt |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | Cl | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | Cl | $NH_2$ | O-acetyl |
| amino acid | amino acid | Cl | $NH_2$ | SH |
| amino acid | amino acid | Cl | $NH_2$ | SMe |
| amino acid | amino acid | Cl | $NH_2$ | SEt |
| amino acid | amino acid | Cl | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | Cl | $NH_2$ | F |
| amino acid | amino acid | Cl | $NH_2$ | Cl |
| amino acid | amino acid | Cl | $NH_2$ | Br |
| amino acid | amino acid | Cl | $NH_2$ | I |
| amino acid | H | Cl | $NH_2$ | H |
| amino acid | H | Cl | $NH_2$ | $NH_2$ |
| amino acid | H | Cl | $NH_2$ | NH-cyclopropyl |
| amino acid | H | Cl | $NH_2$ | NH-methyl |
| amino acid | H | Cl | $NH_2$ | NH-ethyl |
| amino acid | H | Cl | $NH_2$ | NH-acetyl |
| amino acid | H | Cl | $NH_2$ | OH |
| amino acid | H | Cl | $NH_2$ | OMe |
| amino acid | H | Cl | $NH_2$ | OEt |
| amino acid | H | Cl | $NH_2$ | O-cyclopropyl |
| amino acid | H | Cl | $NH_2$ | O-acetyl |
| amino acid | H | Cl | $NH_2$ | SH |
| amino acid | H | Cl | $NH_2$ | SMe |
| amino acid | H | Cl | $NH_2$ | SEt |
| amino acid | H | Cl | $NH_2$ | S-cyclopropyl |
| amino acid | H | Cl | $NH_2$ | F |
| amino acid | H | Cl | $NH_2$ | Cl |
| amino acid | H | Cl | $NH_2$ | Br |
| amino acid | H | Cl | $NH_2$ | I |
| amino acid | acyl | Cl | $NH_2$ | H |
| amino acid | acyl | Cl | $NH_2$ | $NH_2$ |
| amino acid | acyl | Cl | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | Cl | $NH_2$ | NH-methyl |
| amino acid | acyl | Cl | $NH_2$ | NH-ethyl |
| amino acid | acyl | Cl | $NH_2$ | NH-acetyl |
| amino acid | acyl | Cl | $NH_2$ | OH |
| amino acid | acyl | Cl | $NH_2$ | OMe |
| amino acid | acyl | Cl | $NH_2$ | OEt |
| amino acid | acyl | Cl | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | Cl | $NH_2$ | O-acetyl |
| amino acid | acyl | Cl | $NH_2$ | SH |
| amino acid | acyl | Cl | $NH_2$ | SMe |
| amino acid | acyl | Cl | $NH_2$ | SEt |
| amino acid | acyl | Cl | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | Cl | $NH_2$ | F |
| amino acid | acyl | Cl | $NH_2$ | Cl |
| amino acid | acyl | Cl | $NH_2$ | Br |
| amino acid | acyl | Cl | $NH_2$ | I |
| acyl | H | F | $NH_2$ | H |
| acyl | H | F | $NH_2$ | $NH_2$ |
| acyl | H | F | $NH_2$ | NH-cyclopropyl |
| acyl | H | F | $NH_2$ | NH-methyl |
| acyl | H | F | $NH_2$ | NH-ethyl |
| acyl | H | F | $NH_2$ | NH-acetyl |
| acyl | H | F | $NH_2$ | OH |
| acyl | H | F | $NH_2$ | OMe |
| acyl | H | F | $NH_2$ | OEt |
| acyl | H | F | $NH_2$ | O-cyclopropyl |
| acyl | H | F | $NH_2$ | O-acetyl |
| acyl | H | F | $NH_2$ | SH |
| acyl | H | F | $NH_2$ | SMe |
| acyl | H | F | $NH_2$ | SEt |
| acyl | H | F | $NH_2$ | S-cyclopropyl |
| acyl | H | F | $NH_2$ | F |
| acyl | H | F | $NH_2$ | Cl |
| acyl | H | F | $NH_2$ | Br |
| acyl | H | F | $NH_2$ | I |
| acyl | acyl | F | $NH_2$ | H |
| acyl | acyl | F | $NH_2$ | $NH_2$ |
| acyl | acyl | F | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | F | $NH_2$ | NH-methyl |
| acyl | acyl | F | $NH_2$ | NH-ethyl |
| acyl | acyl | F | $NH_2$ | NH-acetyl |
| acyl | acyl | F | $NH_2$ | OH |
| acyl | acyl | F | $NH_2$ | OMe |
| acyl | acyl | F | $NH_2$ | OEt |
| acyl | acyl | F | $NH_2$ | O-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | F | $NH_2$ | O-acetyl |
| acyl | acyl | F | $NH_2$ | SH |
| acyl | acyl | F | $NH_2$ | SMe |
| acyl | acyl | F | $NH_2$ | SEt |
| acyl | acyl | F | $NH_2$ | S-cyclopropyl |
| acyl | acyl | F | $NH_2$ | F |
| acyl | acyl | F | $NH_2$ | Cl |
| acyl | acyl | F | $NH_2$ | Br |
| acyl | acyl | F | $NH_2$ | I |
| acyl | amino acid | F | $NH_2$ | H |
| acyl | amino acid | F | $NH_2$ | $NH_2$ |
| acyl | amino acid | F | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | F | $NH_2$ | NH-methyl |
| acyl | amino acid | F | $NH_2$ | NH-ethyl |
| acyl | amino acid | F | $NH_2$ | NH-acetyl |
| acyl | amino acid | F | $NH_2$ | OH |
| acyl | amino acid | F | $NH_2$ | OMe |
| acyl | amino acid | F | $NH_2$ | OEt |
| acyl | amino acid | F | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | F | $NH_2$ | O-acetyl |
| acyl | amino acid | F | $NH_2$ | SH |
| acyl | amino acid | F | $NH_2$ | SMe |
| acyl | amino acid | F | $NH_2$ | SEt |
| acyl | amino acid | F | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | F | $NH_2$ | F |
| acyl | amino acid | F | $NH_2$ | Cl |
| acyl | amino acid | F | $NH_2$ | Br |
| acyl | amino acid | F | $NH_2$ | I |
| H | acyl | F | $NH_2$ | H |
| H | acyl | F | $NH_2$ | $NH_2$ |
| H | acyl | F | $NH_2$ | NH-cyclopropyl |
| H | acyl | F | $NH_2$ | NH-methyl |
| H | acyl | F | $NH_2$ | NH-ethyl |
| H | acyl | F | $NH_2$ | NH-acetyl |
| H | acyl | F | $NH_2$ | OH |
| H | acyl | F | $NH_2$ | OMe |
| H | acyl | F | $NH_2$ | OEt |
| H | acyl | F | $NH_2$ | O-cyclopropyl |
| H | acyl | F | $NH_2$ | O-acetyl |
| H | acyl | F | $NH_2$ | SH |
| H | acyl | F | $NH_2$ | SMe |
| H | acyl | F | $NH_2$ | SEt |
| H | acyl | F | $NH_2$ | S-cyclopropyl |
| H | acyl | F | $NH_2$ | F |
| H | acyl | F | $NH_2$ | Cl |
| H | acyl | F | $NH_2$ | Br |
| H | acyl | F | $NH_2$ | I |
| H | amino acid | F | $NH_2$ | H |
| H | amino acid | F | $NH_2$ | $NH_2$ |
| H | amino acid | F | $NH_2$ | NH-cyclopropyl |
| H | amino acid | F | $NH_2$ | NH-methyl |
| H | amino acid | F | $NH_2$ | NH-ethyl |
| H | amino acid | F | $NH_2$ | NH-acetyl |
| H | amino acid | F | $NH_2$ | OH |
| H | amino acid | F | $NH_2$ | OMe |
| H | amino acid | F | $NH_2$ | OEt |
| H | amino acid | F | $NH_2$ | O-cyclopropyl |
| H | amino acid | F | $NH_2$ | O-acetyl |
| H | amino acid | F | $NH_2$ | SH |
| H | amino acid | F | $NH_2$ | SMe |
| H | amino acid | F | $NH_2$ | SEt |
| H | amino acid | F | $NH_2$ | S-cyclopropyl |
| H | amino acid | F | $NH_2$ | F |
| H | amino acid | F | $NH_2$ | Cl |
| H | amino acid | F | $NH_2$ | Br |
| H | amino acid | F | $NH_2$ | I |
| amino acid | amino acid | F | $NH_2$ | H |
| amino acid | amino acid | F | $NH_2$ | $NH_2$ |
| amino acid | amino acid | F | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | F | $NH_2$ | NH-methyl |
| amino acid | amino acid | F | $NH_2$ | NH-ethyl |
| amino acid | amino acid | F | $NH_2$ | NH-acetyl |
| amino acid | amino acid | F | $NH_2$ | OH |
| amino acid | amino acid | F | $NH_2$ | OMe |
| amino acid | amino acid | F | $NH_2$ | OEt |
| amino acid | amino acid | F | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | F | $NH_2$ | O-acetyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | F | $NH_2$ | SH |
| amino acid | amino acid | F | $NH_2$ | SMe |
| amino acid | amino acid | F | $NH_2$ | SEt |
| amino acid | amino acid | F | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | F | $NH_2$ | F |
| amino acid | amino acid | F | $NH_2$ | Cl |
| amino acid | amino acid | F | $NH_2$ | Br |
| amino acid | amino acid | F | $NH_2$ | I |
| amino acid | H | F | $NH_2$ | H |
| amino acid | H | F | $NH_2$ | $NH_2$ |
| amino acid | H | F | $NH_2$ | NH-cyclopropyl |
| amino acid | H | F | $NH_2$ | NH-methyl |
| amino acid | H | F | $NH_2$ | NH-ethyl |
| amino acid | H | F | $NH_2$ | NH-acetyl |
| amino acid | H | F | $NH_2$ | OH |
| amino acid | H | F | $NH_2$ | OMe |
| amino acid | H | F | $NH_2$ | OEt |
| amino acid | H | F | $NH_2$ | O-cyclopropyl |
| amino acid | H | F | $NH_2$ | O-acetyl |
| amino acid | H | F | $NH_2$ | SH |
| amino acid | H | F | $NH_2$ | SMe |
| amino acid | H | F | $NH_2$ | SEt |
| amino acid | H | F | $NH_2$ | S-cyclopropyl |
| amino acid | H | F | $NH_2$ | F |
| amino acid | H | F | $NH_2$ | Cl |
| amino acid | H | F | $NH_2$ | Br |
| amino acid | H | F | $NH_2$ | I |
| amino acid | acyl | F | $NH_2$ | H |
| amino acid | acyl | F | $NH_2$ | $NH_2$ |
| amino acid | acyl | F | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | F | $NH_2$ | NH-methyl |
| amino acid | acyl | F | $NH_2$ | NH-ethyl |
| amino acid | acyl | F | $NH_2$ | NH-acetyl |
| amino acid | acyl | F | $NH_2$ | OH |
| amino acid | acyl | F | $NH_2$ | OMe |
| amino acid | acyl | F | $NH_2$ | OEt |
| amino acid | acyl | F | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | F | $NH_2$ | O-acetyl |
| amino acid | acyl | F | $NH_2$ | SH |
| amino acid | acyl | F | $NH_2$ | SMe |
| amino acid | acyl | F | $NH_2$ | SEt |
| amino acid | acyl | F | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | F | $NH_2$ | F |
| amino acid | acyl | F | $NH_2$ | Cl |
| amino acid | acyl | F | $NH_2$ | Br |
| amino acid | acyl | F | $NH_2$ | I |
| acyl | H | $NH_2$ | $NH_2$ | H |
| acyl | H | $NH_2$ | $NH_2$ | $NH_2$ |
| acyl | H | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| acyl | H | $NH_2$ | $NH_2$ | NH-methyl |
| acyl | H | $NH_2$ | $NH_2$ | NH-ethyl |
| acyl | H | $NH_2$ | $NH_2$ | NH-acetyl |
| acyl | H | $NH_2$ | $NH_2$ | OH |
| acyl | H | $NH_2$ | $NH_2$ | OMe |
| acyl | H | $NH_2$ | $NH_2$ | OEt |
| acyl | H | $NH_2$ | $NH_2$ | O-cyclopropyl |
| acyl | H | $NH_2$ | $NH_2$ | O-acetyl |
| acyl | H | $NH_2$ | $NH_2$ | SH |
| acyl | H | $NH_2$ | $NH_2$ | SMe |
| acyl | H | $NH_2$ | $NH_2$ | SEt |
| acyl | H | $NH_2$ | $NH_2$ | S-cyclopropyl |
| acyl | H | $NH_2$ | $NH_2$ | F |
| acyl | H | $NH_2$ | $NH_2$ | Cl |
| acyl | H | $NH_2$ | $NH_2$ | Br |
| acyl | H | $NH_2$ | $NH_2$ | I |
| acyl | acyl | $NH_2$ | $NH_2$ | H |
| acyl | acyl | $NH_2$ | $NH_2$ | $NH_2$ |
| acyl | acyl | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | $NH_2$ | $NH_2$ | NH-methyl |
| acyl | acyl | $NH_2$ | $NH_2$ | NH-ethyl |
| acyl | acyl | $NH_2$ | $NH_2$ | NH-acetyl |
| acyl | acyl | $NH_2$ | $NH_2$ | OH |
| acyl | acyl | $NH_2$ | $NH_2$ | OMe |
| acyl | acyl | $NH_2$ | $NH_2$ | OEt |
| acyl | acyl | $NH_2$ | $NH_2$ | O-cyclopropyl |
| acyl | acyl | $NH_2$ | $NH_2$ | O-acetyl |
| acyl | acyl | $NH_2$ | $NH_2$ | SH |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | $NH_2$ | $NH_2$ | SMe |
| acyl | acyl | $NH_2$ | $NH_2$ | SEt |
| acyl | acyl | $NH_2$ | $NH_2$ | S-cyclopropyl |
| acyl | acyl | $NH_2$ | $NH_2$ | F |
| acyl | acyl | $NH_2$ | $NH_2$ | Cl |
| acyl | acyl | $NH_2$ | $NH_2$ | Br |
| acyl | acyl | $NH_2$ | $NH_2$ | I |
| acyl | amino acid | $NH_2$ | $NH_2$ | H |
| acyl | amino acid | $NH_2$ | $NH_2$ | $NH_2$ |
| acyl | amino acid | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | $NH_2$ | $NH_2$ | NH-methyl |
| acyl | amino acid | $NH_2$ | $NH_2$ | NH-ethyl |
| acyl | amino acid | $NH_2$ | $NH_2$ | NH-acetyl |
| acyl | amino acid | $NH_2$ | $NH_2$ | OH |
| acyl | amino acid | $NH_2$ | $NH_2$ | OMe |
| acyl | amino acid | $NH_2$ | $NH_2$ | OEt |
| acyl | amino acid | $NH_2$ | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | $NH_2$ | $NH_2$ | O-acetyl |
| acyl | amino acid | $NH_2$ | $NH_2$ | SH |
| acyl | amino acid | $NH_2$ | $NH_2$ | SMe |
| acyl | amino acid | $NH_2$ | $NH_2$ | SEt |
| acyl | amino acid | $NH_2$ | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | $NH_2$ | F |
| acyl | amino acid | $NH_2$ | $NH_2$ | Cl |
| acyl | amino acid | $NH_2$ | $NH_2$ | Br |
| acyl | amino acid | $NH_2$ | $NH_2$ | I |
| H | acyl | $NH_2$ | $NH_2$ | H |
| H | acyl | $NH_2$ | $NH_2$ | $NH_2$ |
| H | acyl | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| H | acyl | $NH_2$ | $NH_2$ | NH-methyl |
| H | acyl | $NH_2$ | $NH_2$ | NH-ethyl |
| H | acyl | $NH_2$ | $NH_2$ | NH-acetyl |
| H | acyl | $NH_2$ | $NH_2$ | OH |
| H | acyl | $NH_2$ | $NH_2$ | OMe |
| H | acyl | $NH_2$ | $NH_2$ | OEt |
| H | acyl | $NH_2$ | $NH_2$ | O-cyclopropyl |
| H | acyl | $NH_2$ | $NH_2$ | O-acetyl |
| H | acyl | $NH_2$ | $NH_2$ | SH |
| H | acyl | $NH_2$ | $NH_2$ | SMe |
| H | acyl | $NH_2$ | $NH_2$ | SEt |
| H | acyl | $NH_2$ | $NH_2$ | S-cyclopropyl |
| H | acyl | $NH_2$ | $NH_2$ | F |
| H | acyl | $NH_2$ | $NH_2$ | Cl |
| H | acyl | $NH_2$ | $NH_2$ | Br |
| H | acyl | $NH_2$ | $NH_2$ | I |
| H | amino acid | $NH_2$ | $NH_2$ | H |
| H | amino acid | $NH_2$ | $NH_2$ | $NH_2$ |
| H | amino acid | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| H | amino acid | $NH_2$ | $NH_2$ | NH-methyl |
| H | amino acid | $NH_2$ | $NH_2$ | NH-ethyl |
| H | amino acid | $NH_2$ | $NH_2$ | NH-acetyl |
| H | amino acid | $NH_2$ | $NH_2$ | OH |
| H | amino acid | $NH_2$ | $NH_2$ | OMe |
| H | amino acid | $NH_2$ | $NH_2$ | OEt |
| H | amino acid | $NH_2$ | $NH_2$ | O-cyclopropyl |
| H | amino acid | $NH_2$ | $NH_2$ | O-acetyl |
| H | amino acid | $NH_2$ | $NH_2$ | SH |
| H | amino acid | $NH_2$ | $NH_2$ | SMe |
| H | amino acid | $NH_2$ | $NH_2$ | SEt |
| H | amino acid | $NH_2$ | $NH_2$ | S-cyclopropyl |
| H | amino acid | $NH_2$ | $NH_2$ | F |
| H | amino acid | $NH_2$ | $NH_2$ | Cl |
| H | amino acid | $NH_2$ | $NH_2$ | Br |
| H | amino acid | $NH_2$ | $NH_2$ | I |
| amino acid | amino acid | $NH_2$ | $NH_2$ | H |
| amino acid | amino acid | $NH_2$ | $NH_2$ | $NH_2$ |
| amino acid | amino acid | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | NH-methyl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | NH-ethyl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | NH-acetyl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | OH |
| amino acid | amino acid | $NH_2$ | $NH_2$ | OMe |
| amino acid | amino acid | $NH_2$ | $NH_2$ | OEt |
| amino acid | amino acid | $NH_2$ | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | O-acetyl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | SH |
| amino acid | amino acid | $NH_2$ | $NH_2$ | SMe |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | $NH_2$ | $NH_2$ | SEt |
| amino acid | amino acid | $NH_2$ | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | F |
| amino acid | amino acid | $NH_2$ | $NH_2$ | Cl |
| amino acid | amino acid | $NH_2$ | $NH_2$ | Br |
| amino acid | amino acid | $NH_2$ | $NH_2$ | I |
| amino acid | H | $NH_2$ | $NH_2$ | H |
| amino acid | H | $NH_2$ | $NH_2$ | $NH_2$ |
| amino acid | H | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| amino acid | H | $NH_2$ | $NH_2$ | NH-methyl |
| amino acid | H | $NH_2$ | $NH_2$ | NH-ethyl |
| amino acid | H | $NH_2$ | $NH_2$ | NH-acetyl |
| amino acid | H | $NH_2$ | $NH_2$ | OH |
| amino acid | H | $NH_2$ | $NH_2$ | OMe |
| amino acid | H | $NH_2$ | $NH_2$ | OEt |
| amino acid | H | $NH_2$ | $NH_2$ | O-cyclopropyl |
| amino acid | H | $NH_2$ | $NH_2$ | O-acetyl |
| amino acid | H | $NH_2$ | $NH_2$ | SH |
| amino acid | H | $NH_2$ | $NH_2$ | SMe |
| amino acid | H | $NH_2$ | $NH_2$ | SEt |
| amino acid | H | $NH_2$ | $NH_2$ | S-cyclopropyl |
| amino acid | H | $NH_2$ | $NH_2$ | F |
| amino acid | H | $NH_2$ | $NH_2$ | Cl |
| amino acid | H | $NH_2$ | $NH_2$ | Br |
| amino acid | H | $NH_2$ | $NH_2$ | I |
| amino acid | acyl | $NH_2$ | $NH_2$ | H |
| amino acid | acyl | $NH_2$ | $NH_2$ | $NH_2$ |
| amino acid | acyl | $NH_2$ | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | $NH_2$ | $NH_2$ | NH-methyl |
| amino acid | acyl | $NH_2$ | $NH_2$ | NH-ethyl |
| amino acid | acyl | $NH_2$ | $NH_2$ | NH-acetyl |
| amino acid | acyl | $NH_2$ | $NH_2$ | OH |
| amino acid | acyl | $NH_2$ | $NH_2$ | OMe |
| amino acid | acyl | $NH_2$ | $NH_2$ | OEt |
| amino acid | acyl | $NH_2$ | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | $NH_2$ | $NH_2$ | O-acetyl |
| amino acid | acyl | $NH_2$ | $NH_2$ | SH |
| amino acid | acyl | $NH_2$ | $NH_2$ | SMe |
| amino acid | acyl | $NH_2$ | $NH_2$ | SEt |
| amino acid | acyl | $NH_2$ | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | $NH_2$ | $NH_2$ | F |
| amino acid | acyl | $NH_2$ | $NH_2$ | Cl |
| amino acid | acyl | $NH_2$ | $NH_2$ | Br |
| amino acid | acyl | $NH_2$ | $NH_2$ | I |
| acyl | H | SH | $NH_2$ | H |
| acyl | H | SH | $NH_2$ | $NH_2$ |
| acyl | H | SH | $NH_2$ | NH-cyclopropyl |
| acyl | H | SH | $NH_2$ | NH-methyl |
| acyl | H | SH | $NH_2$ | NH-ethyl |
| acyl | H | SH | $NH_2$ | NH-acetyl |
| acyl | H | SH | $NH_2$ | OH |
| acyl | H | SH | $NH_2$ | OMe |
| acyl | H | SH | $NH_2$ | OEt |
| acyl | H | SH | $NH_2$ | O-cyclopropyl |
| acyl | H | SH | $NH_2$ | O-acetyl |
| acyl | H | SH | $NH_2$ | SH |
| acyl | H | SH | $NH_2$ | SMe |
| acyl | H | SH | $NH_2$ | SEt |
| acyl | H | SH | $NH_2$ | S-cyclopropyl |
| acyl | H | SH | $NH_2$ | F |
| acyl | H | SH | $NH_2$ | Cl |
| acyl | H | SH | $NH_2$ | Br |
| acyl | H | SH | $NH_2$ | I |
| acyl | acyl | SH | $NH_2$ | H |
| acyl | acyl | SH | $NH_2$ | $NH_2$ |
| acyl | acyl | SH | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | SH | $NH_2$ | NH-methyl |
| acyl | acyl | SH | $NH_2$ | NH-ethyl |
| acyl | acyl | SH | $NH_2$ | NH-acetyl |
| acyl | acyl | SH | $NH_2$ | OH |
| acyl | acyl | SH | $NH_2$ | OMe |
| acyl | acyl | SH | $NH_2$ | OEt |
| acyl | acyl | SH | $NH_2$ | O-cyclopropyl |
| acyl | acyl | SH | $NH_2$ | O-acetyl |
| acyl | acyl | SH | $NH_2$ | SH |
| acyl | acyl | SH | $NH_2$ | SMe |
| acyl | acyl | SH | $NH_2$ | SEt |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | SH | $NH_2$ | S-cyclopropyl |
| acyl | acyl | SH | $NH_2$ | F |
| acyl | acyl | SH | $NH_2$ | Cl |
| acyl | acyl | SH | $NH_2$ | Br |
| acyl | acyl | SH | $NH_2$ | I |
| acyl | amino acid | SH | $NH_2$ | H |
| acyl | amino acid | SH | $NH_2$ | $NH_2$ |
| acyl | amino acid | SH | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | SH | $NH_2$ | NH-methyl |
| acyl | amino acid | SH | $NH_2$ | NH-ethyl |
| acyl | amino acid | SH | $NH_2$ | NH-acetyl |
| acyl | amino acid | SH | $NH_2$ | OH |
| acyl | amino acid | SH | $NH_2$ | OMe |
| acyl | amino acid | SH | $NH_2$ | OEt |
| acyl | amino acid | SH | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | SH | $NH_2$ | O-acetyl |
| acyl | amino acid | SH | $NH_2$ | SH |
| acyl | amino acid | SH | $NH_2$ | SMe |
| acyl | amino acid | SH | $NH_2$ | SEt |
| acyl | amino acid | SH | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | SH | $NH_2$ | F |
| acyl | amino acid | SH | $NH_2$ | Cl |
| acyl | amino acid | SH | $NH_2$ | Br |
| acyl | amino acid | SH | $NH_2$ | I |
| H | acyl | SH | $NH_2$ | H |
| H | acyl | SH | $NH_2$ | $NH_2$ |
| H | acyl | SH | $NH_2$ | NH-cyclopropyl |
| H | acyl | SH | $NH_2$ | NH-methyl |
| H | acyl | SH | $NH_2$ | NH-ethyl |
| H | acyl | SH | $NH_2$ | NH-acetyl |
| H | acyl | SH | $NH_2$ | OH |
| H | acyl | SH | $NH_2$ | OMe |
| H | acyl | SH | $NH_2$ | OEt |
| H | acyl | SH | $NH_2$ | O-cyclopropyl |
| H | acyl | SH | $NH_2$ | O-acetyl |
| H | acyl | SH | $NH_2$ | SH |
| H | acyl | SH | $NH_2$ | SMe |
| H | acyl | SH | $NH_2$ | SEt |
| H | acyl | SH | $NH_2$ | S-cyclopropyl |
| H | acyl | SH | $NH_2$ | F |
| H | acyl | SH | $NH_2$ | Cl |
| H | acyl | SH | $NH_2$ | Br |
| H | acyl | SH | $NH_2$ | I |
| H | amino acid | SH | $NH_2$ | H |
| H | amino acid | SH | $NH_2$ | $NH_2$ |
| H | amino acid | SH | $NH_2$ | NH-cyclopropyl |
| H | amino acid | SH | $NH_2$ | NH-methyl |
| H | amino acid | SH | $NH_2$ | NH-ethyl |
| H | amino acid | SH | $NH_2$ | NH-acetyl |
| H | amino acid | SH | $NH_2$ | OH |
| H | amino acid | SH | $NH_2$ | OMe |
| H | amino acid | SH | $NH_2$ | OEt |
| H | amino acid | SH | $NH_2$ | O-cyclopropyl |
| H | amino acid | SH | $NH_2$ | O-acetyl |
| H | amino acid | SH | $NH_2$ | SH |
| H | amino acid | SH | $NH_2$ | SMe |
| H | amino acid | SH | $NH_2$ | SEt |
| H | amino acid | SH | $NH_2$ | S-cyclopropyl |
| H | amino acid | SH | $NH_2$ | F |
| H | amino acid | SH | $NH_2$ | Cl |
| H | amino acid | SH | $NH_2$ | Br |
| H | amino acid | SH | $NH_2$ | I |
| amino acid | amino acid | SH | $NH_2$ | H |
| amino acid | amino acid | SH | $NH_2$ | $NH_2$ |
| amino acid | amino acid | SH | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | SH | $NH_2$ | NH-methyl |
| amino acid | amino acid | SH | $NH_2$ | NH-ethyl |
| amino acid | amino acid | SH | $NH_2$ | NH-acetyl |
| amino acid | amino acid | SH | $NH_2$ | OH |
| amino acid | amino acid | SH | $NH_2$ | OMe |
| amino acid | amino acid | SH | $NH_2$ | OEt |
| amino acid | amino acid | SH | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | SH | $NH_2$ | O-acetyl |
| amino acid | amino acid | SH | $NH_2$ | SH |
| amino acid | amino acid | SH | $NH_2$ | SMe |
| amino acid | amino acid | SH | $NH_2$ | SEt |
| amino acid | amino acid | SH | $NH_2$ | S-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | SH | $NH_2$ | F |
| amino acid | amino acid | SH | $NH_2$ | Cl |
| amino acid | amino acid | SH | $NH_2$ | Br |
| amino acid | amino acid | SH | $NH_2$ | I |
| amino acid | H | SH | $NH_2$ | H |
| amino acid | H | SH | $NH_2$ | $NH_2$ |
| amino acid | H | SH | $NH_2$ | NH-cyclopropyl |
| amino acid | H | SH | $NH_2$ | NH-methyl |
| amino acid | H | SH | $NH_2$ | NH-ethyl |
| amino acid | H | SH | $NH_2$ | NH-acetyl |
| amino acid | H | SH | $NH_2$ | OH |
| amino acid | H | SH | $NH_2$ | OMe |
| amino acid | H | SH | $NH_2$ | OEt |
| amino acid | H | SH | $NH_2$ | O-cyclopropyl |
| amino acid | H | SH | $NH_2$ | O-acetyl |
| amino acid | H | SH | $NH_2$ | SH |
| amino acid | H | SH | $NH_2$ | SMe |
| amino acid | H | SH | $NH_2$ | SEt |
| amino acid | H | SH | $NH_2$ | S-cyclopropyl |
| amino acid | H | SH | $NH_2$ | F |
| amino acid | H | SH | $NH_2$ | Cl |
| amino acid | H | SH | $NH_2$ | Br |
| amino acid | H | SH | $NH_2$ | I |
| amino acid | acyl | SH | $NH_2$ | H |
| amino acid | acyl | SH | $NH_2$ | $NH_2$ |
| amino acid | acyl | SH | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | SH | $NH_2$ | NH-methyl |
| amino acid | acyl | SH | $NH_2$ | NH-ethyl |
| amino acid | acyl | SH | $NH_2$ | NH-acetyl |
| amino acid | acyl | SH | $NH_2$ | OH |
| amino acid | acyl | SH | $NH_2$ | OMe |
| amino acid | acyl | SH | $NH_2$ | OEt |
| amino acid | acyl | SH | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | SH | $NH_2$ | O-acetyl |
| amino acid | acyl | SH | $NH_2$ | SH |
| amino acid | acyl | SH | $NH_2$ | SMe |
| amino acid | acyl | SH | $NH_2$ | SEt |
| amino acid | acyl | SH | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | SH | $NH_2$ | F |
| amino acid | acyl | SH | $NH_2$ | Cl |
| amino acid | acyl | SH | $NH_2$ | Br |
| amino acid | acyl | SH | $NH_2$ | I |
| acyl | H | OH | $NH_2$ | H |
| acyl | H | OH | $NH_2$ | $NH_2$ |
| acyl | H | OH | $NH_2$ | NH-cyclopropyl |
| acyl | H | OH | $NH_2$ | NH-methyl |
| acyl | H | OH | $NH_2$ | NH-ethyl |
| acyl | H | OH | $NH_2$ | NH-acetyl |
| acyl | H | OH | $NH_2$ | OH |
| acyl | H | OH | $NH_2$ | OMe |
| acyl | H | OH | $NH_2$ | OEt |
| acyl | H | OH | $NH_2$ | O-cyclopropyl |
| acyl | H | OH | $NH_2$ | O-acetyl |
| acyl | H | OH | $NH_2$ | SH |
| acyl | H | OH | $NH_2$ | SMe |
| acyl | H | OH | $NH_2$ | SEt |
| acyl | H | OH | $NH_2$ | S-cyclopropyl |
| acyl | H | OH | $NH_2$ | F |
| acyl | H | OH | $NH_2$ | Cl |
| acyl | H | OH | $NH_2$ | Br |
| acyl | H | OH | $NH_2$ | I |
| acyl | acyl | OH | $NH_2$ | H |
| acyl | acyl | OH | $NH_2$ | $NH_2$ |
| acyl | acyl | OH | $NH_2$ | NH-cyclopropyl |
| acyl | acyl | OH | $NH_2$ | NH-methyl |
| acyl | acyl | OH | $NH_2$ | NH-ethyl |
| acyl | acyl | OH | $NH_2$ | NH-acetyl |
| acyl | acyl | OH | $NH_2$ | OH |
| acyl | acyl | OH | $NH_2$ | OMe |
| acyl | acyl | OH | $NH_2$ | OEt |
| acyl | acyl | OH | $NH_2$ | O-cyclopropyl |
| acyl | acyl | OH | $NH_2$ | O-acetyl |
| acyl | acyl | OH | $NH_2$ | SH |
| acyl | acyl | OH | $NH_2$ | SMe |
| acyl | acyl | OH | $NH_2$ | SEt |
| acyl | acyl | OH | $NH_2$ | S-cyclopropyl |
| acyl | acyl | OH | $NH_2$ | F |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | OH | $NH_2$ | Cl |
| acyl | acyl | OH | $NH_2$ | Br |
| acyl | acyl | OH | $NH_2$ | I |
| acyl | amino acid | OH | $NH_2$ | H |
| acyl | amino acid | OH | $NH_2$ | $NH_2$ |
| acyl | amino acid | OH | $NH_2$ | NH-cyclopropyl |
| acyl | amino acid | OH | $NH_2$ | NH-methyl |
| acyl | amino acid | OH | $NH_2$ | NH-ethyl |
| acyl | amino acid | OH | $NH_2$ | NH-acetyl |
| acyl | amino acid | OH | $NH_2$ | OH |
| acyl | amino acid | OH | $NH_2$ | OMe |
| acyl | amino acid | OH | $NH_2$ | OEt |
| acyl | amino acid | OH | $NH_2$ | O-cyclopropyl |
| acyl | amino acid | OH | $NH_2$ | O-acetyl |
| acyl | amino acid | OH | $NH_2$ | SH |
| acyl | amino acid | OH | $NH_2$ | SMe |
| acyl | amino acid | OH | $NH_2$ | SEt |
| acyl | amino acid | OH | $NH_2$ | S-cyclopropyl |
| acyl | amino acid | OH | $NH_2$ | F |
| acyl | amino acid | OH | $NH_2$ | Cl |
| acyl | amino acid | OH | $NH_2$ | Br |
| acyl | amino acid | OH | $NH_2$ | I |
| H | acyl | OH | $NH_2$ | H |
| H | acyl | OH | $NH_2$ | $NH_2$ |
| H | acyl | OH | $NH_2$ | NH-cyclopropyl |
| H | acyl | OH | $NH_2$ | NH-methyl |
| H | acyl | OH | $NH_2$ | NH-ethyl |
| H | acyl | OH | $NH_2$ | NH-acetyl |
| H | acyl | OH | $NH_2$ | OH |
| H | acyl | OH | $NH_2$ | OMe |
| H | acyl | OH | $NH_2$ | OEt |
| H | acyl | OH | $NH_2$ | O-cyclopropyl |
| H | acyl | OH | $NH_2$ | O-acetyl |
| H | acyl | OH | $NH_2$ | SH |
| H | acyl | OH | $NH_2$ | SMe |
| H | acyl | OH | $NH_2$ | SEt |
| H | acyl | OH | $NH_2$ | S-cyclopropyl |
| H | acyl | OH | $NH_2$ | F |
| H | acyl | OH | $NH_2$ | Cl |
| H | acyl | OH | $NH_2$ | Br |
| H | acyl | OH | $NH_2$ | I |
| H | amino acid | OH | $NH_2$ | H |
| H | amino acid | OH | $NH_2$ | $NH_2$ |
| H | amino acid | OH | $NH_2$ | NH-cyclopropyl |
| H | amino acid | OH | $NH_2$ | NH-methyl |
| H | amino acid | OH | $NH_2$ | NH-ethyl |
| H | amino acid | OH | $NH_2$ | NH-acetyl |
| H | amino acid | OH | $NH_2$ | OH |
| H | amino acid | OH | $NH_2$ | OMe |
| H | amino acid | OH | $NH_2$ | OEt |
| H | amino acid | OH | $NH_2$ | O-cyclopropyl |
| H | amino acid | OH | $NH_2$ | O-acetyl |
| H | amino acid | OH | $NH_2$ | SH |
| H | amino acid | OH | $NH_2$ | SMe |
| H | amino acid | OH | $NH_2$ | SEt |
| H | amino acid | OH | $NH_2$ | S-cyclopropyl |
| H | amino acid | OH | $NH_2$ | F |
| H | amino acid | OH | $NH_2$ | Cl |
| H | amino acid | OH | $NH_2$ | Br |
| H | amino acid | OH | $NH_2$ | I |
| amino acid | amino acid | OH | $NH_2$ | H |
| amino acid | amino acid | OH | $NH_2$ | $NH_2$ |
| amino acid | amino acid | OH | $NH_2$ | NH-cyclopropyl |
| amino acid | amino acid | OH | $NH_2$ | NH-methyl |
| amino acid | amino acid | OH | $NH_2$ | NH-ethyl |
| amino acid | amino acid | OH | $NH_2$ | NH-acetyl |
| amino acid | amino acid | OH | $NH_2$ | OH |
| amino acid | amino acid | OH | $NH_2$ | OMe |
| amino acid | amino acid | OH | $NH_2$ | OEt |
| amino acid | amino acid | OH | $NH_2$ | O-cyclopropyl |
| amino acid | amino acid | OH | $NH_2$ | O-acetyl |
| amino acid | amino acid | OH | $NH_2$ | SH |
| amino acid | amino acid | OH | $NH_2$ | SMe |
| amino acid | amino acid | OH | $NH_2$ | SEt |
| amino acid | amino acid | OH | $NH_2$ | S-cyclopropyl |
| amino acid | amino acid | OH | $NH_2$ | F |
| amino acid | amino acid | OH | $NH_2$ | Cl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | amino acid | OH | $NH_2$ | Br |
| amino acid | amino acid | OH | $NH_2$ | I |
| amino acid | H | OH | $NH_2$ | H |
| amino acid | H | OH | $NH_2$ | $NH_2$ |
| amino acid | H | OH | $NH_2$ | NH-cyclopropyl |
| amino acid | H | OH | $NH_2$ | NH-methyl |
| amino acid | H | OH | $NH_2$ | NH-ethyl |
| amino acid | H | OH | $NH_2$ | NH-acetyl |
| amino acid | H | OH | $NH_2$ | OH |
| amino acid | H | OH | $NH_2$ | OMe |
| amino acid | H | OH | $NH_2$ | OEt |
| amino acid | H | OH | $NH_2$ | O-cyclopropyl |
| amino acid | H | OH | $NH_2$ | O-acetyl |
| amino acid | H | OH | $NH_2$ | SH |
| amino acid | H | OH | $NH_2$ | SMe |
| amino acid | H | OH | $NH_2$ | SEt |
| amino acid | H | OH | $NH_2$ | S-cyclopropyl |
| amino acid | H | OH | $NH_2$ | F |
| amino acid | H | OH | $NH_2$ | Cl |
| amino acid | H | OH | $NH_2$ | Br |
| amino acid | H | OH | $NH_2$ | I |
| amino acid | acyl | OH | $NH_2$ | H |
| amino acid | acyl | OH | $NH_2$ | $NH_2$ |
| amino acid | acyl | OH | $NH_2$ | NH-cyclopropyl |
| amino acid | acyl | OH | $NH_2$ | NH-methyl |
| amino acid | acyl | OH | $NH_2$ | NH-ethyl |
| amino acid | acyl | OH | $NH_2$ | NH-acetyl |
| amino acid | acyl | OH | $NH_2$ | OH |
| amino acid | acyl | OH | $NH_2$ | OMe |
| amino acid | acyl | OH | $NH_2$ | OEt |
| amino acid | acyl | OH | $NH_2$ | O-cyclopropyl |
| amino acid | acyl | OH | $NH_2$ | O-acetyl |
| amino acid | acyl | OH | $NH_2$ | SH |
| amino acid | acyl | OH | $NH_2$ | SMe |
| amino acid | acyl | OH | $NH_2$ | SEt |
| amino acid | acyl | OH | $NH_2$ | S-cyclopropyl |
| amino acid | acyl | OH | $NH_2$ | F |
| amino acid | acyl | OH | $NH_2$ | Cl |
| amino acid | acyl | OH | $NH_2$ | Br |
| amino acid | acyl | OH | $NH_2$ | I |
| acyl | H | $CH_3$ | SH | H |
| acyl | H | $CH_3$ | SH | $NH_2$ |
| acyl | H | $CH_3$ | SH | NH-cyclopropyl |
| acyl | H | $CH_3$ | SH | NH-methyl |
| acyl | H | $CH_3$ | SH | NH-ethyl |
| acyl | H | $CH_3$ | SH | NH-acetyl |
| acyl | H | $CH_3$ | SH | OH |
| acyl | H | $CH_3$ | SH | OMe |
| acyl | H | $CH_3$ | SH | OEt |
| acyl | H | $CH_3$ | SH | O-cyclopropyl |
| acyl | H | $CH_3$ | SH | O-acetyl |
| acyl | H | $CH_3$ | SH | SH |
| acyl | H | $CH_3$ | SH | SMe |
| acyl | H | $CH_3$ | SH | SEt |
| acyl | H | $CH_3$ | SH | S-cyclopropyl |
| acyl | H | $CH_3$ | SH | F |
| acyl | H | $CH_3$ | SH | Cl |
| acyl | H | $CH_3$ | SH | Br |
| acyl | H | $CH_3$ | SH | I |
| acyl | acyl | $CH_3$ | SH | H |
| acyl | acyl | $CH_3$ | SH | $NH_2$ |
| acyl | acyl | $CH_3$ | SH | NH-cyclopropyl |
| acyl | acyl | $CH_3$ | SH | NH-methyl |
| acyl | acyl | $CH_3$ | SH | NH-ethyl |
| acyl | acyl | $CH_3$ | SH | NH-acetyl |
| acyl | acyl | $CH_3$ | SH | OH |
| acyl | acyl | $CH_3$ | SH | OMe |
| acyl | acyl | $CH_3$ | SH | OEt |
| acyl | acyl | $CH_3$ | SH | O-cyclopropyl |
| acyl | acyl | $CH_3$ | SH | O-acetyl |
| acyl | acyl | $CH_3$ | SH | SH |
| acyl | acyl | $CH_3$ | SH | SMe |
| acyl | acyl | $CH_3$ | SH | SEt |
| acyl | acyl | $CH_3$ | SH | S-cyclopropyl |
| acyl | acyl | $CH_3$ | SH | F |
| acyl | acyl | $CH_3$ | SH | Cl |
| acyl | acyl | $CH_3$ | SH | Br |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | acyl | $CH_3$ | SH | I |
| acyl | amino acid | $CH_3$ | SH | H |
| acyl | amino acid | $CH_3$ | SH | $NH_2$ |
| acyl | amino acid | $CH_3$ | SH | NH-cyclopropyl |
| acyl | amino acid | $CH_3$ | SH | NH-methyl |
| acyl | amino acid | $CH_3$ | SH | NH-ethyl |
| acyl | amino acid | $CH_3$ | SH | NH-acetyl |
| acyl | amino acid | $CH_3$ | SH | OH |
| acyl | amino acid | $CH_3$ | SH | OMe |
| acyl | amino acid | $CH_3$ | SH | OEt |
| acyl | amino acid | $CH_3$ | SH | O-cyclopropyl |
| acyl | amino acid | $CH_3$ | SH | O-acetyl |
| acyl | amino acid | $CH_3$ | SH | SH |
| acyl | amino acid | $CH_3$ | SH | SMe |
| acyl | amino acid | $CH_3$ | SH | SEt |
| acyl | amino acid | $CH_3$ | SH | S-cyclopropyl |
| acyl | amino acid | $CH_3$ | SH | F |
| acyl | amino acid | $CH_3$ | SH | Cl |
| acyl | amino acid | $CH_3$ | SH | Br |
| acyl | amino acid | $CH_3$ | SH | I |
| H | acyl | $CH_3$ | SH | H |
| H | acyl | $CH_3$ | SH | $NH_2$ |
| H | acyl | $CH_3$ | SH | NH-cyclopropyl |
| H | acyl | $CH_3$ | SH | NH-methyl |
| H | acyl | $CH_3$ | SH | NH-ethyl |
| H | acyl | $CH_3$ | SH | NH-acetyl |
| H | acyl | $CH_3$ | SH | OH |
| H | acyl | $CH_3$ | SH | OMe |
| H | acyl | $CH_3$ | SH | OEt |
| H | acyl | $CH_3$ | SH | O-cyclopropyl |
| H | acyl | $CH_3$ | SH | O-acetyl |
| H | acyl | $CH_3$ | SH | SH |
| H | acyl | $CH_3$ | SH | SMe |
| H | acyl | $CH_3$ | SH | SEt |
| H | acyl | $CH_3$ | SH | S-cyclopropyl |
| H | acyl | $CH_3$ | SH | F |
| H | acyl | $CH_3$ | SH | Cl |
| H | acyl | $CH_3$ | SH | Br |
| H | acyl | $CH_3$ | SH | I |
| H | amino acid | $CH_3$ | SH | H |
| H | amino acid | $CH_3$ | SH | $NH_2$ |
| H | amino acid | $CH_3$ | SH | NH-cyclopropyl |
| H | amino acid | $CH_3$ | SH | NH-methyl |
| H | amino acid | $CH_3$ | SH | NH-ethyl |
| H | amino acid | $CH_3$ | SH | NH-acetyl |
| H | amino acid | $CH_3$ | SH | OH |
| H | amino acid | $CH_3$ | SH | OMe |
| H | amino acid | $CH_3$ | SH | OEt |
| H | amino acid | $CH_3$ | SH | O-cyclopropyl |
| H | amino acid | $CH_3$ | SH | O-acetyl |
| H | amino acid | $CH_3$ | SH | SH |
| H | amino acid | $CH_3$ | SH | SMe |
| H | amino acid | $CH_3$ | SH | SEt |
| H | amino acid | $CH_3$ | SH | S-cyclopropyl |
| H | amino acid | $CH_3$ | SH | F |
| H | amino acid | $CH_3$ | SH | Cl |
| H | amino acid | $CH_3$ | SH | Br |
| H | amino acid | $CH_3$ | SH | I |
| amino acid | amino acid | $CH_3$ | SH | H |
| amino acid | amino acid | $CH_3$ | SH | $NH_2$ |
| amino acid | amino acid | $CH_3$ | SH | NH-cyclopropyl |
| amino acid | amino acid | $CH_3$ | SH | NH-methyl |
| amino acid | amino acid | $CH_3$ | SH | NH-ethyl |
| amino acid | amino acid | $CH_3$ | SH | NH-acetyl |
| amino acid | amino acid | $CH_3$ | SH | OH |
| amino acid | amino acid | $CH_3$ | SH | OMe |
| amino acid | amino acid | $CH_3$ | SH | OEt |
| amino acid | amino acid | $CH_3$ | SH | O-cyclopropyl |
| amino acid | amino acid | $CH_3$ | SH | O-acetyl |
| amino acid | amino acid | $CH_3$ | SH | SH |
| amino acid | amino acid | $CH_3$ | SH | SMe |
| amino acid | amino acid | $CH_3$ | SH | SEt |
| amino acid | amino acid | $CH_3$ | SH | S-cyclopropyl |
| amino acid | amino acid | $CH_3$ | SH | F |
| amino acid | amino acid | $CH_3$ | SH | Cl |
| amino acid | amino acid | $CH_3$ | SH | Br |
| amino acid | amino acid | $CH_3$ | SH | I |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | $CH_3$ | SH | H |
| amino acid | H | $CH_3$ | SH | $NH_2$ |
| amino acid | H | $CH_3$ | SH | NH-cyclopropyl |
| amino acid | H | $CH_3$ | SH | NH-methyl |
| amino acid | H | $CH_3$ | SH | NH-ethyl |
| amino acid | H | $CH_3$ | SH | NH-acetyl |
| amino acid | H | $CH_3$ | SH | OH |
| amino acid | H | $CH_3$ | SH | OMe |
| amino acid | H | $CH_3$ | SH | OEt |
| amino acid | H | $CH_3$ | SH | O-cyclopropyl |
| amino acid | H | $CH_3$ | SH | O-acetyl |
| amino acid | H | $CH_3$ | SH | SH |
| amino acid | H | $CH_3$ | SH | SMe |
| amino acid | H | $CH_3$ | SH | SEt |
| amino acid | H | $CH_3$ | SH | S-cyclopropyl |
| amino acid | H | $CH_3$ | SH | F |
| amino acid | H | $CH_3$ | SH | Cl |
| amino acid | H | $CH_3$ | SH | Br |
| amino acid | H | $CH_3$ | SH | I |
| amino acid | acyl | $CH_3$ | SH | H |
| amino acid | acyl | $CH_3$ | SH | $NH_2$ |
| amino acid | acyl | $CH_3$ | SH | NH-cyclopropyl |
| amino acid | acyl | $CH_3$ | SH | NH-methyl |
| amino acid | acyl | $CH_3$ | SH | NH-ethyl |
| amino acid | acyl | $CH_3$ | SH | NH-acetyl |
| amino acid | acyl | $CH_3$ | SH | OH |
| amino acid | acyl | $CH_3$ | SH | OMe |
| amino acid | acyl | $CH_3$ | SH | OEt |
| amino acid | acyl | $CH_3$ | SH | O-cyclopropyl |
| amino acid | acyl | $CH_3$ | SH | O-acetyl |
| amino acid | acyl | $CH_3$ | SH | SH |
| amino acid | acyl | $CH_3$ | SH | SMe |
| amino acid | acyl | $CH_3$ | SH | SEt |
| amino acid | acyl | $CH_3$ | SH | S-cyclopropyl |
| amino acid | acyl | $CH_3$ | SH | F |
| amino acid | acyl | $CH_3$ | SH | Cl |
| amino acid | acyl | $CH_3$ | SH | Br |
| amino acid | acyl | $CH_3$ | SH | I |
| acyl | H | $CF_3$ | SH | H |
| acyl | H | $CF_3$ | SH | $NH_2$ |
| acyl | H | $CF_3$ | SH | NH-cyclopropyl |
| acyl | H | $CF_3$ | SH | NH-methyl |
| acyl | H | $CF_3$ | SH | NH-ethyl |
| acyl | H | $CF_3$ | SH | NH-acetyl |
| acyl | H | $CF_3$ | SH | OH |
| acyl | H | $CF_3$ | SH | OMe |
| acyl | H | $CF_3$ | SH | OEt |
| acyl | H | $CF_3$ | SH | O-cyclopropyl |
| acyl | H | $CF_3$ | SH | O-acetyl |
| acyl | H | $CF_3$ | SH | SH |
| acyl | H | $CF_3$ | SH | SMe |
| acyl | H | $CF_3$ | SH | SEt |
| acyl | H | $CF_3$ | SH | S-cyclopropyl |
| acyl | H | $CF_3$ | SH | F |
| acyl | H | $CF_3$ | SH | Cl |
| acyl | H | $CF_3$ | SH | Br |
| acyl | H | $CF_3$ | SH | I |
| acyl | acyl | $CF_3$ | SH | H |
| acyl | acyl | $CF_3$ | SH | $NH_2$ |
| acyl | acyl | $CF_3$ | SH | NH-cyclopropyl |
| acyl | acyl | $CF_3$ | SH | NH-methyl |
| acyl | acyl | $CF_3$ | SH | NH-ethyl |
| acyl | acyl | $CF_3$ | SH | NH-acetyl |
| acyl | acyl | $CF_3$ | SH | OH |
| acyl | acyl | $CF_3$ | SH | OMe |
| acyl | acyl | $CF_3$ | SH | OEt |
| acyl | acyl | $CF_3$ | SH | O-cyclopropyl |
| acyl | acyl | $CF_3$ | SH | O-acetyl |
| acyl | acyl | $CF_3$ | SH | SH |
| acyl | acyl | $CF_3$ | SH | SMe |
| acyl | acyl | $CF_3$ | SH | SEt |
| acyl | acyl | $CF_3$ | SH | S-cyclopropyl |
| acyl | acyl | $CF_3$ | SH | F |
| acyl | acyl | $CF_3$ | SH | Cl |
| acyl | acyl | $CF_3$ | SH | Br |
| acyl | acyl | $CF_3$ | SH | I |
| acyl | amino acid | $CF_3$ | SH | H |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | $CF_3$ | SH | $NH_2$ |
| acyl | amino acid | $CF_3$ | SH | NH-cyclopropyl |
| acyl | amino acid | $CF_3$ | SH | NH-methyl |
| acyl | amino acid | $CF_3$ | SH | NH-ethyl |
| acyl | amino acid | $CF_3$ | SH | NH-acetyl |
| acyl | amino acid | $CF_3$ | SH | OH |
| acyl | amino acid | $CF_3$ | SH | OMe |
| acyl | amino acid | $CF_3$ | SH | OEt |
| acyl | amino acid | $CF_3$ | SH | O-cyclopropyl |
| acyl | amino acid | $CF_3$ | SH | O-acetyl |
| acyl | amino acid | $CF_3$ | SH | SH |
| acyl | amino acid | $CF_3$ | SH | SMe |
| acyl | amino acid | $CF_3$ | SH | SEt |
| acyl | amino acid | $CF_3$ | SH | S-cyclopropyl |
| acyl | amino acid | $CF_3$ | SH | F |
| acyl | amino acid | $CF_3$ | SH | Cl |
| acyl | amino acid | $CF_3$ | SH | Br |
| acyl | amino acid | $CF_3$ | SH | I |
| H | acyl | $CF_3$ | SH | H |
| H | acyl | $CF_3$ | SH | $NH_2$ |
| H | acyl | $CF_3$ | SH | NH-cyclopropyl |
| H | acyl | $CF_3$ | SH | NH-methyl |
| H | acyl | $CF_3$ | SH | NH-ethyl |
| H | acyl | $CF_3$ | SH | NH-acetyl |
| H | acyl | $CF_3$ | SH | OH |
| H | acyl | $CF_3$ | SH | OMe |
| H | acyl | $CF_3$ | SH | OEt |
| H | acyl | $CF_3$ | SH | O-cyclopropyl |
| H | acyl | $CF_3$ | SH | O-acetyl |
| H | acyl | $CF_3$ | SH | SH |
| H | acyl | $CF_3$ | SH | SMe |
| H | acyl | $CF_3$ | SH | SEt |
| H | acyl | $CF_3$ | SH | S-cyclopropyl |
| H | acyl | $CF_3$ | SH | F |
| H | acyl | $CF_3$ | SH | Cl |
| H | acyl | $CF_3$ | SH | Br |
| H | acyl | $CF_3$ | SH | I |
| H | amino acid | $CF_3$ | SH | H |
| H | amino acid | $CF_3$ | SH | $NH_2$ |
| H | amino acid | $CF_3$ | SH | NH-cyclopropyl |
| H | amino acid | $CF_3$ | SH | NH-methyl |
| H | amino acid | $CF_3$ | SH | NH-ethyl |
| H | amino acid | $CF_3$ | SH | NH-acetyl |
| H | amino acid | $CF_3$ | SH | OH |
| H | amino acid | $CF_3$ | SH | OMe |
| H | amino acid | $CF_3$ | SH | OEt |
| H | amino acid | $CF_3$ | SH | O-cyclopropyl |
| H | amino acid | $CF_3$ | SH | O-acetyl |
| H | amino acid | $CF_3$ | SH | SH |
| H | amino acid | $CF_3$ | SH | SMe |
| H | amino acid | $CF_3$ | SH | SEt |
| H | amino acid | $CF_3$ | SH | S-cyclopropyl |
| H | amino acid | $CF_3$ | SH | F |
| H | amino acid | $CF_3$ | SH | Cl |
| H | amino acid | $CF_3$ | SH | Br |
| H | amino acid | $CF_3$ | SH | I |
| amino acid | amino acid | $CF_3$ | SH | H |
| amino acid | amino acid | $CF_3$ | SH | $NH_2$ |
| amino acid | amino acid | $CF_3$ | SH | NH-cyclopropyl |
| amino acid | amino acid | $CF_3$ | SH | NH-methyl |
| amino acid | amino acid | $CF_3$ | SH | NH-ethyl |
| amino acid | amino acid | $CF_3$ | SH | NH-acetyl |
| amino acid | amino acid | $CF_3$ | SH | OH |
| amino acid | amino acid | $CF_3$ | SH | OMe |
| amino acid | amino acid | $CF_3$ | SH | OEt |
| amino acid | amino acid | $CF_3$ | SH | O-cyclopropyl |
| amino acid | amino acid | $CF_3$ | SH | O-acetyl |
| amino acid | amino acid | $CF_3$ | SH | SH |
| amino acid | amino acid | $CF_3$ | SH | SMe |
| amino acid | amino acid | $CF_3$ | SH | SEt |
| amino acid | amino acid | $CF_3$ | SH | S-cyclopropyl |
| amino acid | amino acid | $CF_3$ | SH | F |
| amino acid | amino acid | $CF_3$ | SH | Cl |
| amino acid | amino acid | $CF_3$ | SH | Br |
| amino acid | amino acid | $CF_3$ | SH | I |
| amino acid | H | $CF_3$ | SH | H |
| amino acid | H | $CF_3$ | SH | $NH_2$ |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | $CF_3$ | SH | NH-cyclopropyl |
| amino acid | H | $CF_3$ | SH | NH-methyl |
| amino acid | H | $CF_3$ | SH | NH-ethyl |
| amino acid | H | $CF_3$ | SH | NH-acetyl |
| amino acid | H | $CF_3$ | SH | OH |
| amino acid | H | $CF_3$ | SH | OMe |
| amino acid | H | $CF_3$ | SH | OEt |
| amino acid | H | $CF_3$ | SH | O-cyclopropyl |
| amino acid | H | $CF_3$ | SH | O-acetyl |
| amino acid | H | $CF_3$ | SH | SH |
| amino acid | H | $CF_3$ | SH | SMe |
| amino acid | H | $CF_3$ | SH | SEt |
| amino acid | H | $CF_3$ | SH | S-cyclopropyl |
| amino acid | H | $CF_3$ | SH | F |
| amino acid | H | $CF_3$ | SH | Cl |
| amino acid | H | $CF_3$ | SH | Br |
| amino acid | H | $CF_3$ | SH | I |
| amino acid | acyl | $CF_3$ | SH | H |
| amino acid | acyl | $CF_3$ | SH | $NH_2$ |
| amino acid | acyl | $CF_3$ | SH | NH-cyclopropyl |
| amino acid | acyl | $CF_3$ | SH | NH-methyl |
| amino acid | acyl | $CF_3$ | SH | NH-ethyl |
| amino acid | acyl | $CF_3$ | SH | NH-acetyl |
| amino acid | acyl | $CF_3$ | SH | OH |
| amino acid | acyl | $CF_3$ | SH | OMe |
| amino acid | acyl | $CF_3$ | SH | OEt |
| amino acid | acyl | $CF_3$ | SH | O-cyclopropyl |
| amino acid | acyl | $CF_3$ | SH | O-acetyl |
| amino acid | acyl | $CF_3$ | SH | SH |
| amino acid | acyl | $CF_3$ | SH | SMe |
| amino acid | acyl | $CF_3$ | SH | SEt |
| amino acid | acyl | $CF_3$ | SH | S-cyclopropyl |
| amino acid | acyl | $CF_3$ | SH | F |
| amino acid | acyl | $CF_3$ | SH | Cl |
| amino acid | acyl | $CF_3$ | SH | Br |
| amino acid | acyl | $CF_3$ | SH | I |
| acyl | H | Br | SH | H |
| acyl | H | Br | SH | $NH_2$ |
| acyl | H | Br | SH | NH-cyclopropyl |
| acyl | H | Br | SH | NH-methyl |
| acyl | H | Br | SH | NH-ethyl |
| acyl | H | Br | SH | NH-acetyl |
| acyl | H | Br | SH | OH |
| acyl | H | Br | SH | OMe |
| acyl | H | Br | SH | OEt |
| acyl | H | Br | SH | O-cyclopropyl |
| acyl | H | Br | SH | O-acetyl |
| acyl | H | Br | SH | SH |
| acyl | H | Br | SH | SMe |
| acyl | H | Br | SH | SEt |
| acyl | H | Br | SH | S-cyclopropyl |
| acyl | H | Br | SH | F |
| acyl | H | Br | SH | Cl |
| acyl | H | Br | SH | Br |
| acyl | H | Br | SH | I |
| acyl | acyl | Br | SH | H |
| acyl | acyl | Br | SH | $NH_2$ |
| acyl | acyl | Br | SH | NH-cyclopropyl |
| acyl | acyl | Br | SH | NH-methyl |
| acyl | acyl | Br | SH | NH-ethyl |
| acyl | acyl | Br | SH | NH-acetyl |
| acyl | acyl | Br | SH | OH |
| acyl | acyl | Br | SH | OMe |
| acyl | acyl | Br | SH | OEt |
| acyl | acyl | Br | SH | O-cyclopropyl |
| acyl | acyl | Br | SH | O-acetyl |
| acyl | acyl | Br | SH | SH |
| acyl | acyl | Br | SH | SMe |
| acyl | acyl | Br | SH | SEt |
| acyl | acyl | Br | SH | S-cyclopropyl |
| acyl | acyl | Br | SH | F |
| acyl | acyl | Br | SH | Cl |
| acyl | acyl | Br | SH | Br |
| acyl | acyl | Br | SH | I |
| acyl | amino acid | Br | SH | H |
| acyl | amino acid | Br | SH | $NH_2$ |
| acyl | amino acid | Br | SH | NH-cyclopropyl |
| acyl | amino acid | Br | SH | NH-methyl |
| acyl | amino acid | Br | SH | NH-ethyl |
| acyl | amino acid | Br | SH | NH-acetyl |
| acyl | amino acid | Br | SH | OH |
| acyl | amino acid | Br | SH | OMe |
| acyl | amino acid | Br | SH | OEt |
| acyl | amino acid | Br | SH | O-cyclopropyl |
| acyl | amino acid | Br | SH | O-acetyl |
| acyl | amino acid | Br | SH | SH |
| acyl | amino acid | Br | SH | SMe |
| acyl | amino acid | Br | SH | SEt |
| acyl | amino acid | Br | SH | S-cyclopropyl |
| acyl | amino acid | Br | SH | F |
| acyl | amino acid | Br | SH | Cl |
| acyl | amino acid | Br | SH | Br |
| acyl | amino acid | Br | SH | I |
| H | acyl | Br | SH | H |
| H | acyl | Br | SH | $NH_2$ |
| H | acyl | Br | SH | NH-cyclopropyl |
| H | acyl | Br | SH | NH-methyl |
| H | acyl | Br | SH | NH-ethyl |
| H | acyl | Br | SH | NH-acetyl |
| H | acyl | Br | SH | OH |
| H | acyl | Br | SH | OMe |
| H | acyl | Br | SH | OEt |
| H | acyl | Br | SH | O-cyclopropyl |
| H | acyl | Br | SH | O-acetyl |
| H | acyl | Br | SH | SH |
| H | acyl | Br | SH | SMe |
| H | acyl | Br | SH | SEt |
| H | acyl | Br | SH | S-cyclopropyl |
| H | acyl | Br | SH | F |
| H | acyl | Br | SH | Cl |
| H | acyl | Br | SH | Br |
| H | acyl | Br | SH | I |
| H | amino acid | Br | SH | H |
| H | amino acid | Br | SH | $NH_2$ |
| H | amino acid | Br | SH | NH-cyclopropyl |
| H | amino acid | Br | SH | NH-methyl |
| H | amino acid | Br | SH | NH-ethyl |
| H | amino acid | Br | SH | NH-acetyl |
| H | amino acid | Br | SH | OH |
| H | amino acid | Br | SH | OMe |
| H | amino acid | Br | SH | OEt |
| H | amino acid | Br | SH | O-cyclopropyl |
| H | amino acid | Br | SH | O-acetyl |
| H | amino acid | Br | SH | SH |
| H | amino acid | Br | SH | SMe |
| H | amino acid | Br | SH | SEt |
| H | amino acid | Br | SH | S-cyclopropyl |
| H | amino acid | Br | SH | F |
| H | amino acid | Br | SH | Cl |
| H | amino acid | Br | SH | Br |
| H | amino acid | Br | SH | I |
| amino acid | amino acid | Br | SH | H |
| amino acid | amino acid | Br | SH | $NH_2$ |
| amino acid | amino acid | Br | SH | NH-cyclopropyl |
| amino acid | amino acid | Br | SH | NH-methyl |
| amino acid | amino acid | Br | SH | NH-ethyl |
| amino acid | amino acid | Br | SH | NH-acetyl |
| amino acid | amino acid | Br | SH | OH |
| amino acid | amino acid | Br | SH | OMe |
| amino acid | amino acid | Br | SH | OEt |
| amino acid | amino acid | Br | SH | O-cyclopropyl |
| amino acid | amino acid | Br | SH | O-acetyl |
| amino acid | amino acid | Br | SH | SH |
| amino acid | amino acid | Br | SH | SMe |
| amino acid | amino acid | Br | SH | SEt |
| amino acid | amino acid | Br | SH | S-cyclopropyl |
| amino acid | amino acid | Br | SH | F |
| amino acid | amino acid | Br | SH | Cl |
| amino acid | amino acid | Br | SH | Br |
| amino acid | amino acid | Br | SH | I |
| amino acid | H | Br | SH | H |
| amino acid | H | Br | SH | $NH_2$ |
| amino acid | H | Br | SH | NH-cyclopropyl |
| amino acid | H | Br | SH | NH-methyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | Br | SH | NH-ethyl |
| amino acid | H | Br | SH | NH-acetyl |
| amino acid | H | Br | SH | OH |
| amino acid | H | Br | SH | OMe |
| amino acid | H | Br | SH | OEt |
| amino acid | H | Br | SH | O-cyclopropyl |
| amino acid | H | Br | SH | O-acetyl |
| amino acid | H | Br | SH | SH |
| amino acid | H | Br | SH | SMe |
| amino acid | H | Br | SH | SEt |
| amino acid | H | Br | SH | S-cyclopropyl |
| amino acid | H | Br | SH | F |
| amino acid | H | Br | SH | Cl |
| amino acid | H | Br | SH | Br |
| amino acid | H | Br | SH | I |
| amino acid | acyl | Br | SH | H |
| amino acid | acyl | Br | SH | $NH_2$ |
| amino acid | acyl | Br | SH | NH-cyclopropyl |
| amino acid | acyl | Br | SH | NH-methyl |
| amino acid | acyl | Br | SH | NH-ethyl |
| amino acid | acyl | Br | SH | NH-acetyl |
| amino acid | acyl | Br | SH | OH |
| amino acid | acyl | Br | SH | OMe |
| amino acid | acyl | Br | SH | OEt |
| amino acid | acyl | Br | SH | O-cyclopropyl |
| amino acid | acyl | Br | SH | O-acetyl |
| amino acid | acyl | Br | SH | SH |
| amino acid | acyl | Br | SH | SMe |
| amino acid | acyl | Br | SH | SEt |
| amino acid | acyl | Br | SH | S-cyclopropyl |
| amino acid | acyl | Br | SH | F |
| amino acid | acyl | Br | SH | Cl |
| amino acid | acyl | Br | SH | Br |
| amino acid | acyl | Br | SH | I |
| acyl | H | Cl | SH | H |
| acyl | H | Cl | SH | $NH_2$ |
| acyl | H | Cl | SH | NH-cyclopropyl |
| acyl | H | Cl | SH | NH-methyl |
| acyl | H | Cl | SH | NH-ethyl |
| acyl | H | Cl | SH | NH-acetyl |
| acyl | H | Cl | SH | OH |
| acyl | H | Cl | SH | OMe |
| acyl | H | Cl | SH | OEt |
| acyl | H | Cl | SH | O-cyclopropyl |
| acyl | H | Cl | SH | O-acetyl |
| acyl | H | Cl | SH | SH |
| acyl | H | Cl | SH | SMe |
| acyl | H | Cl | SH | SEt |
| acyl | H | Cl | SH | S-cyclopropyl |
| acyl | H | Cl | SH | F |
| acyl | H | Cl | SH | Cl |
| acyl | H | Cl | SH | Br |
| acyl | H | Cl | SH | I |
| acyl | acyl | Cl | SH | H |
| acyl | acyl | Cl | SH | $NH_2$ |
| acyl | acyl | Cl | SH | NH-cyclopropyl |
| acyl | acyl | Cl | SH | NH-methyl |
| acyl | acyl | Cl | SH | NH-ethyl |
| acyl | acyl | Cl | SH | NH-acetyl |
| acyl | acyl | Cl | SH | OH |
| acyl | acyl | Cl | SH | OMe |
| acyl | acyl | Cl | SH | OEt |
| acyl | acyl | Cl | SH | O-cyclopropyl |
| acyl | acyl | Cl | SH | O-acetyl |
| acyl | acyl | Cl | SH | SH |
| acyl | acyl | Cl | SH | SMe |
| acyl | acyl | Cl | SH | SEt |
| acyl | acyl | Cl | SH | S-cyclopropyl |
| acyl | acyl | Cl | SH | F |
| acyl | acyl | Cl | SH | Cl |
| acyl | acyl | Cl | SH | Br |
| acyl | acyl | Cl | SH | I |
| acyl | amino acid | Cl | SH | H |
| acyl | amino acid | Cl | SH | $NH_2$ |
| acyl | amino acid | Cl | SH | NH-cyclopropyl |
| acyl | amino acid | Cl | SH | NH-methyl |
| acyl | amino acid | Cl | SH | NH-ethyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | Cl | SH | NH-acetyl |
| acyl | amino acid | Cl | SH | OH |
| acyl | amino acid | Cl | SH | OMe |
| acyl | amino acid | Cl | SH | OEt |
| acyl | amino acid | Cl | SH | O-cyclopropyl |
| acyl | amino acid | Cl | SH | O-acetyl |
| acyl | amino acid | Cl | SH | SH |
| acyl | amino acid | Cl | SH | SMe |
| acyl | amino acid | Cl | SH | SEt |
| acyl | amino acid | Cl | SH | S-cyclopropyl |
| acyl | amino acid | Cl | SH | F |
| acyl | amino acid | Cl | SH | Cl |
| acyl | amino acid | Cl | SH | Br |
| acyl | amino acid | Cl | SH | I |
| H | acyl | Cl | SH | H |
| H | acyl | Cl | SH | $NH_2$ |
| H | acyl | Cl | SH | NH-cyclopropyl |
| H | acyl | Cl | SH | NH-methyl |
| H | acyl | Cl | SH | NH-ethyl |
| H | acyl | Cl | SH | NH-acetyl |
| H | acyl | Cl | SH | OH |
| H | acyl | Cl | SH | OMe |
| H | acyl | Cl | SH | OEt |
| H | acyl | Cl | SH | O-cyclopropyl |
| H | acyl | Cl | SH | O-acetyl |
| H | acyl | Cl | SH | SH |
| H | acyl | Cl | SH | SMe |
| H | acyl | Cl | SH | SEt |
| H | acyl | Cl | SH | S-cyclopropyl |
| H | acyl | Cl | SH | F |
| H | acyl | Cl | SH | Cl |
| H | acyl | Cl | SH | Br |
| H | acyl | Cl | SH | I |
| H | amino acid | Cl | SH | H |
| H | amino acid | Cl | SH | $NH_2$ |
| H | amino acid | Cl | SH | NH-cyclopropyl |
| H | amino acid | Cl | SH | NH-methyl |
| H | amino acid | Cl | SH | NH-ethyl |
| H | amino acid | Cl | SH | NH-acetyl |
| H | amino acid | Cl | SH | OH |
| H | amino acid | Cl | SH | OMe |
| H | amino acid | Cl | SH | OEt |
| H | amino acid | Cl | SH | O-cyclopropyl |
| H | amino acid | Cl | SH | O-acetyl |
| H | amino acid | Cl | SH | SH |
| H | amino acid | Cl | SH | SMe |
| H | amino acid | Cl | SH | SEt |
| H | amino acid | Cl | SH | S-cyclopropyl |
| H | amino acid | Cl | SH | F |
| H | amino acid | Cl | SH | Cl |
| H | amino acid | Cl | SH | Br |
| H | amino acid | Cl | SH | I |
| amino acid | amino acid | Cl | SH | H |
| amino acid | amino acid | Cl | SH | $NH_2$ |
| amino acid | amino acid | Cl | SH | NH-cyclopropyl |
| amino acid | amino acid | Cl | SH | NH-methyl |
| amino acid | amino acid | Cl | SH | NH-ethyl |
| amino acid | amino acid | Cl | SH | NH-acetyl |
| amino acid | amino acid | Cl | SH | OH |
| amino acid | amino acid | Cl | SH | OMe |
| amino acid | amino acid | Cl | SH | OEt |
| amino acid | amino acid | Cl | SH | O-cyclopropyl |
| amino acid | amino acid | Cl | SH | O-acetyl |
| amino acid | amino acid | Cl | SH | SH |
| amino acid | amino acid | Cl | SH | SMe |
| amino acid | amino acid | Cl | SH | SEt |
| amino acid | amino acid | Cl | SH | S-cyclopropyl |
| amino acid | amino acid | Cl | SH | F |
| amino acid | amino acid | Cl | SH | Cl |
| amino acid | amino acid | Cl | SH | Br |
| amino acid | amino acid | Cl | SH | I |
| amino acid | H | Cl | SH | H |
| amino acid | H | Cl | SH | $NH_2$ |
| amino acid | H | Cl | SH | NH-cyclopropyl |
| amino acid | H | Cl | SH | NH-methyl |
| amino acid | H | Cl | SH | NH-ethyl |
| amino acid | H | Cl | SH | NH-acetyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | Cl | SH | OH |
| amino acid | H | Cl | SH | OMe |
| amino acid | H | Cl | SH | OEt |
| amino acid | H | Cl | SH | O-cyclopropyl |
| amino acid | H | Cl | SH | O-acetyl |
| amino acid | H | Cl | SH | SH |
| amino acid | H | Cl | SH | SMe |
| amino acid | H | Cl | SH | SEt |
| amino acid | H | Cl | SH | S-cyclopropyl |
| amino acid | H | Cl | SH | F |
| amino acid | H | Cl | SH | Cl |
| amino acid | H | Cl | SH | Br |
| amino acid | H | Cl | SH | I |
| amino acid | acyl | Cl | SH | H |
| amino acid | acyl | Cl | SH | $NH_2$ |
| amino acid | acyl | Cl | SH | NH-cyclopropyl |
| amino acid | acyl | Cl | SH | NH-methyl |
| amino acid | acyl | Cl | SH | NH-ethyl |
| amino acid | acyl | Cl | SH | NH-acetyl |
| amino acid | acyl | Cl | SH | OH |
| amino acid | acyl | Cl | SH | OMe |
| amino acid | acyl | Cl | SH | OEt |
| amino acid | acyl | Cl | SH | O-cyclopropyl |
| amino acid | acyl | Cl | SH | O-acetyl |
| amino acid | acyl | Cl | SH | SH |
| amino acid | acyl | Cl | SH | SMe |
| amino acid | acyl | Cl | SH | SEt |
| amino acid | acyl | Cl | SH | S-cyclopropyl |
| amino acid | acyl | Cl | SH | F |
| amino acid | acyl | Cl | SH | Cl |
| amino acid | acyl | Cl | SH | Br |
| amino acid | acyl | Cl | SH | I |
| acyl | H | F | SH | H |
| acyl | H | F | SH | $NH_2$ |
| acyl | H | F | SH | NH-cyclopropyl |
| acyl | H | F | SH | NH-methyl |
| acyl | H | F | SH | NH-ethyl |
| acyl | H | F | SH | NH-acetyl |
| acyl | H | F | SH | OH |
| acyl | H | F | SH | OMe |
| acyl | H | F | SH | OEt |
| acyl | H | F | SH | O-cyclopropyl |
| acyl | H | F | SH | O-acetyl |
| acyl | H | F | SH | SH |
| acyl | H | F | SH | SMe |
| acyl | H | F | SH | SEt |
| acyl | H | F | SH | S-cyclopropyl |
| acyl | H | F | SH | F |
| acyl | H | F | SH | Cl |
| acyl | H | F | SH | Br |
| acyl | H | F | SH | I |
| acyl | acyl | F | SH | H |
| acyl | acyl | F | SH | $NH_2$ |
| acyl | acyl | F | SH | NH-cyclopropyl |
| acyl | acyl | F | SH | NH-methyl |
| acyl | acyl | F | SH | NH-ethyl |
| acyl | acyl | F | SH | NH-acetyl |
| acyl | acyl | F | SH | OH |
| acyl | acyl | F | SH | OMe |
| acyl | acyl | F | SH | OEt |
| acyl | acyl | F | SH | O-cyclopropyl |
| acyl | acyl | F | SH | O-acetyl |
| acyl | acyl | F | SH | SH |
| acyl | acyl | F | SH | SMe |
| acyl | acyl | F | SH | SEt |
| acyl | acyl | F | SH | S-cyclopropyl |
| acyl | acyl | F | SH | F |
| acyl | acyl | F | SH | Cl |
| acyl | acyl | F | SH | Br |
| acyl | acyl | F | SH | I |
| acyl | amino acid | F | SH | H |
| acyl | amino acid | F | SH | $NH_2$ |
| acyl | amino acid | F | SH | NH-cyclopropyl |
| acyl | amino acid | F | SH | NH-methyl |
| acyl | amino acid | F | SH | NH-ethyl |
| acyl | amino acid | F | SH | NH-acetyl |
| acyl | amino acid | F | SH | OH |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | F | SH | OMe |
| acyl | amino acid | F | SH | OEt |
| acyl | amino acid | F | SH | O-cyclopropyl |
| acyl | amino acid | F | SH | O-acetyl |
| acyl | amino acid | F | SH | SH |
| acyl | amino acid | F | SH | SMe |
| acyl | amino acid | F | SH | SEt |
| acyl | amino acid | F | SH | S-cyclopropyl |
| acyl | amino acid | F | SH | F |
| acyl | amino acid | F | SH | Cl |
| acyl | amino acid | F | SH | Br |
| acyl | amino acid | F | SH | I |
| H | acyl | F | SH | H |
| H | acyl | F | SH | $NH_2$ |
| H | acyl | F | SH | NH-cyclopropyl |
| H | acyl | F | SH | NH-methyl |
| H | acyl | F | SH | NH-ethyl |
| H | acyl | F | SH | NH-acetyl |
| H | acyl | F | SH | OH |
| H | acyl | F | SH | OMe |
| H | acyl | F | SH | OEt |
| H | acyl | F | SH | O-cyclopropyl |
| H | acyl | F | SH | O-acetyl |
| H | acyl | F | SH | SH |
| H | acyl | F | SH | SMe |
| H | acyl | F | SH | SEt |
| H | acyl | F | SH | S-cyclopropyl |
| H | acyl | F | SH | F |
| H | acyl | F | SH | Cl |
| H | acyl | F | SH | Br |
| H | acyl | F | SH | I |
| H | amino acid | F | SH | H |
| H | amino acid | F | SH | $NH_2$ |
| H | amino acid | F | SH | NH-cyclopropyl |
| H | amino acid | F | SH | NH-methyl |
| H | amino acid | F | SH | NH-ethyl |
| H | amino acid | F | SH | NH-acetyl |
| H | amino acid | F | SH | OH |
| H | amino acid | F | SH | OMe |
| H | amino acid | F | SH | OEt |
| H | amino acid | F | SH | O-cyclopropyl |
| H | amino acid | F | SH | O-acetyl |
| H | amino acid | F | SH | SH |
| H | amino acid | F | SH | SMe |
| H | amino acid | F | SH | SEt |
| H | amino acid | F | SH | S-cyclopropyl |
| H | amino acid | F | SH | F |
| H | amino acid | F | SH | Cl |
| H | amino acid | F | SH | Br |
| H | amino acid | F | SH | I |
| amino acid | amino acid | F | SH | H |
| amino acid | amino acid | F | SH | $NH_2$ |
| amino acid | amino acid | F | SH | NH-cyclopropyl |
| amino acid | amino acid | F | SH | NH-methyl |
| amino acid | amino acid | F | SH | NH-ethyl |
| amino acid | amino acid | F | SH | NH-acetyl |
| amino acid | amino acid | F | SH | OH |
| amino acid | amino acid | F | SH | OMe |
| amino acid | amino acid | F | SH | OEt |
| amino acid | amino acid | F | SH | O-cyclopropyl |
| amino acid | amino acid | F | SH | O-acetyl |
| amino acid | amino acid | F | SH | SH |
| amino acid | amino acid | F | SH | SMe |
| amino acid | amino acid | F | SH | SEt |
| amino acid | amino acid | F | SH | S-cyclopropyl |
| amino acid | amino acid | F | SH | F |
| amino acid | amino acid | F | SH | Cl |
| amino acid | amino acid | F | SH | Br |
| amino acid | amino acid | F | SH | I |
| amino acid | H | F | SH | H |
| amino acid | H | F | SH | $NH_2$ |
| amino acid | H | F | SH | NH-cyclopropyl |
| amino acid | H | F | SH | NH-methyl |
| amino acid | H | F | SH | NH-ethyl |
| amino acid | H | F | SH | NH-acetyl |
| amino acid | H | F | SH | OH |
| amino acid | H | F | SH | OMe |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | F | SH | OEt |
| amino acid | H | F | SH | O-cyclopropyl |
| amino acid | H | F | SH | O-acetyl |
| amino acid | H | F | SH | SH |
| amino acid | H | F | SH | SMe |
| amino acid | H | F | SH | SEt |
| amino acid | H | F | SH | S-cyclopropyl |
| amino acid | H | F | SH | F |
| amino acid | H | F | SH | Cl |
| amino acid | H | F | SH | Br |
| amino acid | H | F | SH | I |
| amino acid | acyl | F | SH | H |
| amino acid | acyl | F | SH | $NH_2$ |
| amino acid | acyl | F | SH | NH-cyclopropyl |
| amino acid | acyl | F | SH | NH-methyl |
| amino acid | acyl | F | SH | NH-ethyl |
| amino acid | acyl | F | SH | NH-acetyl |
| amino acid | acyl | F | SH | OH |
| amino acid | acyl | F | SH | OMe |
| amino acid | acyl | F | SH | OEt |
| amino acid | acyl | F | SH | O-cyclopropyl |
| amino acid | acyl | F | SH | O-acetyl |
| amino acid | acyl | F | SH | SH |
| amino acid | acyl | F | SH | SMe |
| amino acid | acyl | F | SH | SEt |
| amino acid | acyl | F | SH | S-cyclopropyl |
| amino acid | acyl | F | SH | F |
| amino acid | acyl | F | SH | Cl |
| amino acid | acyl | F | SH | Br |
| amino acid | acyl | F | SH | I |
| acyl | H | $NH_2$ | SH | H |
| acyl | H | $NH_2$ | SH | $NH_2$ |
| acyl | H | $NH_2$ | SH | NH-cyclopropyl |
| acyl | H | $NH_2$ | SH | NH-methyl |
| acyl | H | $NH_2$ | SH | NH-ethyl |
| acyl | H | $NH_2$ | SH | NH-acetyl |
| acyl | H | $NH_2$ | SH | OH |
| acyl | H | $NH_2$ | SH | OMe |
| acyl | H | $NH_2$ | SH | OEt |
| acyl | H | $NH_2$ | SH | O-cyclopropyl |
| acyl | H | $NH_2$ | SH | O-acetyl |
| acyl | H | $NH_2$ | SH | SH |
| acyl | H | $NH_2$ | SH | SMe |
| acyl | H | $NH_2$ | SH | SEt |
| acyl | H | $NH_2$ | SH | S-cyclopropyl |
| acyl | H | $NH_2$ | SH | F |
| acyl | H | $NH_2$ | SH | Cl |
| acyl | H | $NH_2$ | SH | Br |
| acyl | H | $NH_2$ | SH | I |
| acyl | acyl | $NH_2$ | SH | H |
| acyl | acyl | $NH_2$ | SH | $NH_2$ |
| acyl | acyl | $NH_2$ | SH | NH-cyclopropyl |
| acyl | acyl | $NH_2$ | SH | NH-methyl |
| acyl | acyl | $NH_2$ | SH | NH-ethyl |
| acyl | acyl | $NH_2$ | SH | NH-acetyl |
| acyl | acyl | $NH_2$ | SH | OH |
| acyl | acyl | $NH_2$ | SH | OMe |
| acyl | acyl | $NH_2$ | SH | OEt |
| acyl | acyl | $NH_2$ | SH | O-cyclopropyl |
| acyl | acyl | $NH_2$ | SH | O-acetyl |
| acyl | acyl | $NH_2$ | SH | SH |
| acyl | acyl | $NH_2$ | SH | SMe |
| acyl | acyl | $NH_2$ | SH | SEt |
| acyl | acyl | $NH_2$ | SH | S-cyclopropyl |
| acyl | acyl | $NH_2$ | SH | F |
| acyl | acyl | $NH_2$ | SH | Cl |
| acyl | acyl | $NH_2$ | SH | Br |
| acyl | acyl | $NH_2$ | SH | I |
| acyl | amino acid | $NH_2$ | SH | H |
| acyl | amino acid | $NH_2$ | SH | $NH_2$ |
| acyl | amino acid | $NH_2$ | SH | NH-cyclopropyl |
| acyl | amino acid | $NH_2$ | SH | NH-methyl |
| acyl | amino acid | $NH_2$ | SH | NH-ethyl |
| acyl | amino acid | $NH_2$ | SH | NH-acetyl |
| acyl | amino acid | $NH_2$ | SH | OH |
| acyl | amino acid | $NH_2$ | SH | OMe |
| acyl | amino acid | $NH_2$ | SH | OEt |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | $NH_2$ | SH | O-cyclopropyl |
| acyl | amino acid | $NH_2$ | SH | O-acetyl |
| acyl | amino acid | $NH_2$ | SH | SH |
| acyl | amino acid | $NH_2$ | SH | SMe |
| acyl | amino acid | $NH_2$ | SH | SEt |
| acyl | amino acid | $NH_2$ | SH | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | SH | F |
| acyl | amino acid | $NH_2$ | SH | Cl |
| acyl | amino acid | $NH_2$ | SH | Br |
| acyl | amino acid | $NH_2$ | SH | I |
| H | acyl | $NH_2$ | SH | H |
| H | acyl | $NH_2$ | SH | $NH_2$ |
| H | acyl | $NH_2$ | SH | NH-cyclopropyl |
| H | acyl | $NH_2$ | SH | NH-methyl |
| H | acyl | $NH_2$ | SH | NH-ethyl |
| H | acyl | $NH_2$ | SH | NH-acetyl |
| H | acyl | $NH_2$ | SH | OH |
| H | acyl | $NH_2$ | SH | OMe |
| H | acyl | $NH_2$ | SH | OEt |
| H | acyl | $NH_2$ | SH | O-cyclopropyl |
| H | acyl | $NH_2$ | SH | O-acetyl |
| H | acyl | $NH_2$ | SH | SH |
| H | acyl | $NH_2$ | SH | SMe |
| H | acyl | $NH_2$ | SH | SEt |
| H | acyl | $NH_2$ | SH | S-cyclopropyl |
| H | acyl | $NH_2$ | SH | F |
| H | acyl | $NH_2$ | SH | Cl |
| H | acyl | $NH_2$ | SH | Br |
| H | acyl | $NH_2$ | SH | I |
| H | amino acid | $NH_2$ | SH | H |
| H | amino acid | $NH_2$ | SH | $NH_2$ |
| H | amino acid | $NH_2$ | SH | NH-cyclopropyl |
| H | amino acid | $NH_2$ | SH | NH-methyl |
| H | amino acid | $NH_2$ | SH | NH-ethyl |
| H | amino acid | $NH_2$ | SH | NH-acetyl |
| H | amino acid | $NH_2$ | SH | OH |
| H | amino acid | $NH_2$ | SH | OMe |
| H | amino acid | $NH_2$ | SH | OEt |
| H | amino acid | $NH_2$ | SH | O-cyclopropyl |
| H | amino acid | $NH_2$ | SH | O-acetyl |
| H | amino acid | $NH_2$ | SH | SH |
| H | amino acid | $NH_2$ | SH | SMe |
| H | amino acid | $NH_2$ | SH | SEt |
| H | amino acid | $NH_2$ | SH | S-cyclopropyl |
| H | amino acid | $NH_2$ | SH | F |
| H | amino acid | $NH_2$ | SH | Cl |
| H | amino acid | $NH_2$ | SH | Br |
| H | amino acid | $NH_2$ | SH | I |
| amino acid | amino acid | $NH_2$ | SH | H |
| amino acid | amino acid | $NH_2$ | SH | $NH_2$ |
| amino acid | amino acid | $NH_2$ | SH | NH-cyclopropyl |
| amino acid | amino acid | $NH_2$ | SH | NH-methyl |
| amino acid | amino acid | $NH_2$ | SH | NH-ethyl |
| amino acid | amino acid | $NH_2$ | SH | NH-acetyl |
| amino acid | amino acid | $NH_2$ | SH | OH |
| amino acid | amino acid | $NH_2$ | SH | OMe |
| amino acid | amino acid | $NH_2$ | SH | OEt |
| amino acid | amino acid | $NH_2$ | SH | O-cyclopropyl |
| amino acid | amino acid | $NH_2$ | SH | O-acetyl |
| amino acid | amino acid | $NH_2$ | SH | SH |
| amino acid | amino acid | $NH_2$ | SH | SMe |
| amino acid | amino acid | $NH_2$ | SH | SEt |
| amino acid | amino acid | $NH_2$ | SH | S-cyclopropyl |
| amino acid | amino acid | $NH_2$ | SH | F |
| amino acid | amino acid | $NH_2$ | SH | Cl |
| amino acid | amino acid | $NH_2$ | SH | Br |
| amino acid | amino acid | $NH_2$ | SH | I |
| amino acid | H | $NH_2$ | SH | H |
| amino acid | H | $NH_2$ | SH | $NH_2$ |
| amino acid | H | $NH_2$ | SH | NH-cyclopropyl |
| amino acid | H | $NH_2$ | SH | NH-methyl |
| amino acid | H | $NH_2$ | SH | NH-ethyl |
| amino acid | H | $NH_2$ | SH | NH-acetyl |
| amino acid | H | $NH_2$ | SH | OH |
| amino acid | H | $NH_2$ | SH | OMe |
| amino acid | H | $NH_2$ | SH | OEt |
| amino acid | H | $NH_2$ | SH | O-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | $NH_2$ | SH | O-acetyl |
| amino acid | H | $NH_2$ | SH | SH |
| amino acid | H | $NH_2$ | SH | SMe |
| amino acid | H | $NH_2$ | SH | SEt |
| amino acid | H | $NH_2$ | SH | S-cyclopropyl |
| amino acid | H | $NH_2$ | SH | F |
| amino acid | H | $NH_2$ | SH | Cl |
| amino acid | H | $NH_2$ | SH | Br |
| amino acid | H | $NH_2$ | SH | I |
| amino acid | acyl | $NH_2$ | SH | H |
| amino acid | acyl | $NH_2$ | SH | $NH_2$ |
| amino acid | acyl | $NH_2$ | SH | NH-cyclopropyl |
| amino acid | acyl | $NH_2$ | SH | NH-methyl |
| amino acid | acyl | $NH_2$ | SH | NH-ethyl |
| amino acid | acyl | $NH_2$ | SH | NH-acetyl |
| amino acid | acyl | $NH_2$ | SH | OH |
| amino acid | acyl | $NH_2$ | SH | OMe |
| amino acid | acyl | $NH_2$ | SH | OEt |
| amino acid | acyl | $NH_2$ | SH | O-cyclopropyl |
| amino acid | acyl | $NH_2$ | SH | O-acetyl |
| amino acid | acyl | $NH_2$ | SH | SH |
| amino acid | acyl | $NH_2$ | SH | SMe |
| amino acid | acyl | $NH_2$ | SH | SEt |
| amino acid | acyl | $NH_2$ | SH | S-cyclopropyl |
| amino acid | acyl | $NH_2$ | SH | F |
| amino acid | acyl | $NH_2$ | SH | Cl |
| amino acid | acyl | $NH_2$ | SH | Br |
| amino acid | acyl | $NH_2$ | SH | I |
| acyl | H | SH | SH | H |
| acyl | H | SH | SH | $NH_2$ |
| acyl | H | SH | SH | NH-cyclopropyl |
| acyl | H | SH | SH | NH-methyl |
| acyl | H | SH | SH | NH-ethyl |
| acyl | H | SH | SH | NH-acetyl |
| acyl | H | SH | SH | OH |
| acyl | H | SH | SH | OMe |
| acyl | H | SH | SH | OEt |
| acyl | H | SH | SH | O-cyclopropyl |
| acyl | H | SH | SH | O-acetyl |
| acyl | H | SH | SH | SH |
| acyl | H | SH | SH | SMe |
| acyl | H | SH | SH | SEt |
| acyl | H | SH | SH | S-cyclopropyl |
| acyl | H | SH | SH | F |
| acyl | H | SH | SH | Cl |
| acyl | H | SH | SH | Br |
| acyl | H | SH | SH | I |
| acyl | acyl | SH | SH | H |
| acyl | acyl | SH | SH | $NH_2$ |
| acyl | acyl | SH | SH | NH-cyclopropyl |
| acyl | acyl | SH | SH | NH-methyl |
| acyl | acyl | SH | SH | NH-ethyl |
| acyl | acyl | SH | SH | NH-acetyl |
| acyl | acyl | SH | SH | OH |
| acyl | acyl | SH | SH | OMe |
| acyl | acyl | SH | SH | OEt |
| acyl | acyl | SH | SH | O-cyclopropyl |
| acyl | acyl | SH | SH | O-acetyl |
| acyl | acyl | SH | SH | SH |
| acyl | acyl | SH | SH | SMe |
| acyl | acyl | SH | SH | SEt |
| acyl | acyl | SH | SH | S-cyclopropyl |
| acyl | acyl | SH | SH | F |
| acyl | acyl | SH | SH | Cl |
| acyl | acyl | SH | SH | Br |
| acyl | acyl | SH | SH | I |
| acyl | amino acid | SH | SH | H |
| acyl | amino acid | SH | SH | $NH_2$ |
| acyl | amino acid | SH | SH | NH-cyclopropyl |
| acyl | amino acid | SH | SH | NH-methyl |
| acyl | amino acid | SH | SH | NH-ethyl |
| acyl | amino acid | SH | SH | NH-acetyl |
| acyl | amino acid | SH | SH | OH |
| acyl | amino acid | SH | SH | OMe |
| acyl | amino acid | SH | SH | OEt |
| acyl | amino acid | SH | SH | O-cyclopropyl |
| acyl | amino acid | SH | SH | O-acetyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | SH | SH | SH |
| acyl | amino acid | SH | SH | SMe |
| acyl | amino acid | SH | SH | SEt |
| acyl | amino acid | SH | SH | S-cyclopropyl |
| acyl | amino acid | SH | SH | F |
| acyl | amino acid | SH | SH | Cl |
| acyl | amino acid | SH | SH | Br |
| acyl | amino acid | SH | SH | I |
| H | acyl | SH | SH | H |
| H | acyl | SH | SH | $NH_2$ |
| H | acyl | SH | SH | NH-cyclopropyl |
| H | acyl | SH | SH | NH-methyl |
| H | acyl | SH | SH | NH-ethyl |
| H | acyl | SH | SH | NH-acetyl |
| H | acyl | SH | SH | OH |
| H | acyl | SH | SH | OMe |
| H | acyl | SH | SH | OEt |
| H | acyl | SH | SH | O-cyclopropyl |
| H | acyl | SH | SH | O-acetyl |
| H | acyl | SH | SH | SH |
| H | acyl | SH | SH | SMe |
| H | acyl | SH | SH | SEt |
| H | acyl | SH | SH | S-cyclopropyl |
| H | acyl | SH | SH | F |
| H | acyl | SH | SH | Cl |
| H | acyl | SH | SH | Br |
| H | acyl | SH | SH | I |
| H | amino acid | SH | SH | H |
| H | amino acid | SH | SH | $NH_2$ |
| H | amino acid | SH | SH | NH-cyclopropyl |
| H | amino acid | SH | SH | NH-methyl |
| H | amino acid | SH | SH | NH-ethyl |
| H | amino acid | SH | SH | NH-acetyl |
| H | amino acid | SH | SH | OH |
| H | amino acid | SH | SH | OMe |
| H | amino acid | SH | SH | OEt |
| H | amino acid | SH | SH | O-cyclopropyl |
| H | amino acid | SH | SH | O-acetyl |
| H | amino acid | SH | SH | SH |
| H | amino acid | SH | SH | SMe |
| H | amino acid | SH | SH | SEt |
| H | amino acid | SH | SH | S-cyclopropyl |
| H | amino acid | SH | SH | F |
| H | amino acid | SH | SH | Cl |
| H | amino acid | SH | SH | Br |
| H | amino acid | SH | SH | I |
| amino acid | amino acid | SH | SH | H |
| amino acid | amino acid | SH | SH | $NH_2$ |
| amino acid | amino acid | SH | SH | NH-cyclopropyl |
| amino acid | amino acid | SH | SH | NH-methyl |
| amino acid | amino acid | SH | SH | NH-ethyl |
| amino acid | amino acid | SH | SH | NH-acetyl |
| amino acid | amino acid | SH | SH | OH |
| amino acid | amino acid | SH | SH | OMe |
| amino acid | amino acid | SH | SH | OEt |
| amino acid | amino acid | SH | SH | O-cyclopropyl |
| amino acid | amino acid | SH | SH | O-acetyl |
| amino acid | amino acid | SH | SH | SH |
| amino acid | amino acid | SH | SH | SMe |
| amino acid | amino acid | SH | SH | SEt |
| amino acid | amino acid | SH | SH | S-cyclopropyl |
| amino acid | amino acid | SH | SH | F |
| amino acid | amino acid | SH | SH | Cl |
| amino acid | amino acid | SH | SH | Br |
| amino acid | amino acid | SH | SH | I |
| amino acid | H | SH | SH | H |
| amino acid | H | SH | SH | $NH_2$ |
| amino acid | H | SH | SH | NH-cyclopropyl |
| amino acid | H | SH | SH | NH-methyl |
| amino acid | H | SH | SH | NH-ethyl |
| amino acid | H | SH | SH | NH-acetyl |
| amino acid | H | SH | SH | OH |
| amino acid | H | SH | SH | OMe |
| amino acid | H | SH | SH | OEt |
| amino acid | H | SH | SH | O-cyclopropyl |
| amino acid | H | SH | SH | O-acetyl |
| amino acid | H | SH | SH | SH |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | SH | SH | SMe |
| amino acid | H | SH | SH | SEt |
| amino acid | H | SH | SH | S-cyclopropyl |
| amino acid | H | SH | SH | F |
| amino acid | H | SH | SH | Cl |
| amino acid | H | SH | SH | Br |
| amino acid | H | SH | SH | I |
| amino acid | acyl | SH | SH | H |
| amino acid | acyl | SH | SH | $NH_2$ |
| amino acid | acyl | SH | SH | NH-cyclopropyl |
| amino acid | acyl | SH | SH | NH-methyl |
| amino acid | acyl | SH | SH | NH-ethyl |
| amino acid | acyl | SH | SH | NH-acetyl |
| amino acid | acyl | SH | SH | OH |
| amino acid | acyl | SH | SH | OMe |
| amino acid | acyl | SH | SH | OEt |
| amino acid | acyl | SH | SH | O-cyclopropyl |
| amino acid | acyl | SH | SH | O-acetyl |
| amino acid | acyl | SH | SH | SH |
| amino acid | acyl | SH | SH | SMe |
| amino acid | acyl | SH | SH | SEt |
| amino acid | acyl | SH | SH | S-cyclopropyl |
| amino acid | acyl | SH | SH | F |
| amino acid | acyl | SH | SH | Cl |
| amino acid | acyl | SH | SH | Br |
| amino acid | acyl | SH | SH | I |
| acyl | H | OH | SH | H |
| acyl | H | OH | SH | $NH_2$ |
| acyl | H | OH | SH | NH-cyclopropyl |
| acyl | H | OH | SH | NH-methyl |
| acyl | H | OH | SH | NH-ethyl |
| acyl | H | OH | SH | NH-acetyl |
| acyl | H | OH | SH | OH |
| acyl | H | OH | SH | OMe |
| acyl | H | OH | SH | OEt |
| acyl | H | OH | SH | O-cyclopropyl |
| acyl | H | OH | SH | O-acetyl |
| acyl | H | OH | SH | SH |
| acyl | H | OH | SH | SMe |
| acyl | H | OH | SH | SEt |
| acyl | H | OH | SH | S-cyclopropyl |
| acyl | H | OH | SH | F |
| acyl | H | OH | SH | Cl |
| acyl | H | OH | SH | Br |
| acyl | H | OH | SH | I |
| acyl | acyl | OH | SH | H |
| acyl | acyl | OH | SH | $NH_2$ |
| acyl | acyl | OH | SH | NH-cyclopropyl |
| acyl | acyl | OH | SH | NH-methyl |
| acyl | acyl | OH | SH | NH-ethyl |
| acyl | acyl | OH | SH | NH-acetyl |
| acyl | acyl | OH | SH | OH |
| acyl | acyl | OH | SH | OMe |
| acyl | acyl | OH | SH | OEt |
| acyl | acyl | OH | SH | O-cyclopropyl |
| acyl | acyl | OH | SH | O-acetyl |
| acyl | acyl | OH | SH | SH |
| acyl | acyl | OH | SH | SMe |
| acyl | acyl | OH | SH | SEt |
| acyl | acyl | OH | SH | S-cyclopropyl |
| acyl | acyl | OH | SH | F |
| acyl | acyl | OH | SH | Cl |
| acyl | acyl | OH | SH | Br |
| acyl | acyl | OH | SH | I |
| acyl | amino acid | OH | SH | H |
| acyl | amino acid | OH | SH | $NH_2$ |
| acyl | amino acid | OH | SH | NH-cyclopropyl |
| acyl | amino acid | OH | SH | NH-methyl |
| acyl | amino acid | OH | SH | NH-ethyl |
| acyl | amino acid | OH | SH | NH-acetyl |
| acyl | amino acid | OH | SH | OH |
| acyl | amino acid | OH | SH | OMe |
| acyl | amino acid | OH | SH | OEt |
| acyl | amino acid | OH | SH | O-cyclopropyl |
| acyl | amino acid | OH | SH | O-acetyl |
| acyl | amino acid | OH | SH | SH |
| acyl | amino acid | OH | SH | SMe |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | OH | SH | SEt |
| acyl | amino acid | OH | SH | S-cyclopropyl |
| acyl | amino acid | OH | SH | F |
| acyl | amino acid | OH | SH | Cl |
| acyl | amino acid | OH | SH | Br |
| acyl | amino acid | OH | SH | I |
| H | acyl | OH | SH | H |
| H | acyl | OH | SH | $NH_2$ |
| H | acyl | OH | SH | NH-cyclopropyl |
| H | acyl | OH | SH | NH-methyl |
| H | acyl | OH | SH | NH-ethyl |
| H | acyl | OH | SH | NH-acetyl |
| H | acyl | OH | SH | OH |
| H | acyl | OH | SH | OMe |
| H | acyl | OH | SH | OEt |
| H | acyl | OH | SH | O-cyclopropyl |
| H | acyl | OH | SH | O-acetyl |
| H | acyl | OH | SH | SH |
| H | acyl | OH | SH | SMe |
| H | acyl | OH | SH | SEt |
| H | acyl | OH | SH | S-cyclopropyl |
| H | acyl | OH | SH | F |
| H | acyl | OH | SH | Cl |
| H | acyl | OH | SH | Br |
| H | acyl | OH | SH | I |
| H | amino acid | OH | SH | H |
| H | amino acid | OH | SH | $NH_2$ |
| H | amino acid | OH | SH | NH-cyclopropyl |
| H | amino acid | OH | SH | NH-methyl |
| H | amino acid | OH | SH | NH-ethyl |
| H | amino acid | OH | SH | NH-acetyl |
| H | amino acid | OH | SH | OH |
| H | amino acid | OH | SH | OMe |
| H | amino acid | OH | SH | OEt |
| H | amino acid | OH | SH | O-cyclopropyl |
| H | amino acid | OH | SH | O-acetyl |
| H | amino acid | OH | SH | SH |
| H | amino acid | OH | SH | SMe |
| H | amino acid | OH | SH | SEt |
| H | amino acid | OH | SH | S-cyclopropyl |
| H | amino acid | OH | SH | F |
| H | amino acid | OH | SH | Cl |
| H | amino acid | OH | SH | Br |
| H | amino acid | OH | SH | I |
| amino acid | amino acid | OH | SH | H |
| amino acid | amino acid | OH | SH | $NH_2$ |
| amino acid | amino acid | OH | SH | NH-cyclopropyl |
| amino acid | amino acid | OH | SH | NH-methyl |
| amino acid | amino acid | OH | SH | NH-ethyl |
| amino acid | amino acid | OH | SH | NH-acetyl |
| amino acid | amino acid | OH | SH | OH |
| amino acid | amino acid | OH | SH | OMe |
| amino acid | amino acid | OH | SH | OEt |
| amino acid | amino acid | OH | SH | O-cyclopropyl |
| amino acid | amino acid | OH | SH | O-acetyl |
| amino acid | amino acid | OH | SH | SH |
| amino acid | amino acid | OH | SH | SMe |
| amino acid | amino acid | OH | SH | SEt |
| amino acid | amino acid | OH | SH | S-cyclopropyl |
| amino acid | amino acid | OH | SH | F |
| amino acid | amino acid | OH | SH | Cl |
| amino acid | amino acid | OH | SH | Br |
| amino acid | amino acid | OH | SH | I |
| amino acid | H | OH | SH | H |
| amino acid | H | OH | SH | $NH_2$ |
| amino acid | H | OH | SH | NH-cyclopropyl |
| amino acid | H | OH | SH | NH-methyl |
| amino acid | H | OH | SH | NH-ethyl |
| amino acid | H | OH | SH | NH-acetyl |
| amino acid | H | OH | SH | OH |
| amino acid | H | OH | SH | OMe |
| amino acid | H | OH | SH | OEt |
| amino acid | H | OH | SH | O-cyclopropyl |
| amino acid | H | OH | SH | O-acetyl |
| amino acid | H | OH | SH | SH |
| amino acid | H | OH | SH | SMe |
| amino acid | H | OH | SH | SEt |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | OH | SH | S-cyclopropyl |
| amino acid | H | OH | SH | F |
| amino acid | H | OH | SH | Cl |
| amino acid | H | OH | SH | Br |
| amino acid | H | OH | SH | I |
| amino acid | acyl | OH | SH | H |
| amino acid | acyl | OH | SH | $NH_2$ |
| amino acid | acyl | OH | SH | NH-cyclopropyl |
| amino acid | acyl | OH | SH | NH-methyl |
| amino acid | acyl | OH | SH | NH-ethyl |
| amino acid | acyl | OH | SH | NH-acetyl |
| amino acid | acyl | OH | SH | OH |
| amino acid | acyl | OH | SH | OMe |
| amino acid | acyl | OH | SH | OEt |
| amino acid | acyl | OH | SH | O-cyclopropyl |
| amino acid | acyl | OH | SH | O-acetyl |
| amino acid | acyl | OH | SH | SH |
| amino acid | acyl | OH | SH | SMe |
| amino acid | acyl | OH | SH | SEt |
| amino acid | acyl | OH | SH | S-cyclopropyl |
| amino acid | acyl | OH | SH | F |
| amino acid | acyl | OH | SH | Cl |
| amino acid | acyl | OH | SH | Br |
| amino acid | acyl | OH | SH | I |
| acyl | H | $CH_3$ | OH | H |
| acyl | H | $CH_3$ | OH | $NH_2$ |
| acyl | H | $CH_3$ | OH | NH-cyclopropyl |
| acyl | H | $CH_3$ | OH | NH-methyl |
| acyl | H | $CH_3$ | OH | NH-ethyl |
| acyl | H | $CH_3$ | OH | NH-acetyl |
| acyl | H | $CH_3$ | OH | OH |
| acyl | H | $CH_3$ | OH | OMe |
| acyl | H | $CH_3$ | OH | OEt |
| acyl | H | $CH_3$ | OH | O-cyclopropyl |
| acyl | H | $CH_3$ | OH | O-acetyl |
| acyl | H | $CH_3$ | OH | SH |
| acyl | H | $CH_3$ | OH | SMe |
| acyl | H | $CH_3$ | OH | SEt |
| acyl | H | $CH_3$ | OH | S-cyclopropyl |
| acyl | H | $CH_3$ | OH | F |
| acyl | H | $CH_3$ | OH | Cl |
| acyl | H | $CH_3$ | OH | Br |
| acyl | H | $CH_3$ | OH | I |
| acyl | acyl | $CH_3$ | OH | H |
| acyl | acyl | $CH_3$ | OH | $NH_2$ |
| acyl | acyl | $CH_3$ | OH | NH-cyclopropyl |
| acyl | acyl | $CH_3$ | OH | NH-methyl |
| acyl | acyl | $CH_3$ | OH | NH-ethyl |
| acyl | acyl | $CH_3$ | OH | NH-acetyl |
| acyl | acyl | $CH_3$ | OH | OH |
| acyl | acyl | $CH_3$ | OH | OMe |
| acyl | acyl | $CH_3$ | OH | OEt |
| acyl | acyl | $CH_3$ | OH | O-cyclopropyl |
| acyl | acyl | $CH_3$ | OH | O-acetyl |
| acyl | acyl | $CH_3$ | OH | SH |
| acyl | acyl | $CH_3$ | OH | SMe |
| acyl | acyl | $CH_3$ | OH | SEt |
| acyl | acyl | $CH_3$ | OH | S-cyclopropyl |
| acyl | acyl | $CH_3$ | OH | F |
| acyl | acyl | $CH_3$ | OH | Cl |
| acyl | acyl | $CH_3$ | OH | Br |
| acyl | acyl | $CH_3$ | OH | I |
| acyl | amino acid | $CH_3$ | OH | H |
| acyl | amino acid | $CH_3$ | OH | $NH_2$ |
| acyl | amino acid | $CH_3$ | OH | NH-cyclopropyl |
| acyl | amino acid | $CH_3$ | OH | NH-methyl |
| acyl | amino acid | $CH_3$ | OH | NH-ethyl |
| acyl | amino acid | $CH_3$ | OH | NH-acetyl |
| acyl | amino acid | $CH_3$ | OH | OH |
| acyl | amino acid | $CH_3$ | OH | OMe |
| acyl | amino acid | $CH_3$ | OH | OEt |
| acyl | amino acid | $CH_3$ | OH | O-cyclopropyl |
| acyl | amino acid | $CH_3$ | OH | O-acetyl |
| acyl | amino acid | $CH_3$ | OH | SH |
| acyl | amino acid | $CH_3$ | OH | SMe |
| acyl | amino acid | $CH_3$ | OH | SEt |
| acyl | amino acid | $CH_3$ | OH | S-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | $CH_3$ | OH | F |
| acyl | amino acid | $CH_3$ | OH | Cl |
| acyl | amino acid | $CH_3$ | OH | Br |
| acyl | amino acid | $CH_3$ | OH | I |
| H | acyl | $CH_3$ | OH | H |
| H | acyl | $CH_3$ | OH | $NH_2$ |
| H | acyl | $CH_3$ | OH | NH-cyclopropyl |
| H | acyl | $CH_3$ | OH | NH-methyl |
| H | acyl | $CH_3$ | OH | NH-ethyl |
| H | acyl | $CH_3$ | OH | NH-acetyl |
| H | acyl | $CH_3$ | OH | OH |
| H | acyl | $CH_3$ | OH | OMe |
| H | acyl | $CH_3$ | OH | OEt |
| H | acyl | $CH_3$ | OH | O-cyclopropyl |
| H | acyl | $CH_3$ | OH | O-acetyl |
| H | acyl | $CH_3$ | OH | SH |
| H | acyl | $CH_3$ | OH | SMe |
| H | acyl | $CH_3$ | OH | SEt |
| H | acyl | $CH_3$ | OH | S-cyclopropyl |
| H | acyl | $CH_3$ | OH | F |
| H | acyl | $CH_3$ | OH | Cl |
| H | acyl | $CH_3$ | OH | Br |
| H | acyl | $CH_3$ | OH | I |
| H | amino acid | $CH_3$ | OH | H |
| H | amino acid | $CH_3$ | OH | $NH_2$ |
| H | amino acid | $CH_3$ | OH | NH-cyclopropyl |
| H | amino acid | $CH_3$ | OH | NH-methyl |
| H | amino acid | $CH_3$ | OH | NH-ethyl |
| H | amino acid | $CH_3$ | OH | NH-acetyl |
| H | amino acid | $CH_3$ | OH | OH |
| H | amino acid | $CH_3$ | OH | OMe |
| H | amino acid | $CH_3$ | OH | OEt |
| H | amino acid | $CH_3$ | OH | O-cyclopropyl |
| H | amino acid | $CH_3$ | OH | O-acetyl |
| H | amino acid | $CH_3$ | OH | SH |
| H | amino acid | $CH_3$ | OH | SMe |
| H | amino acid | $CH_3$ | OH | SEt |
| H | amino acid | $CH_3$ | OH | S-cyclopropyl |
| H | amino acid | $CH_3$ | OH | F |
| H | amino acid | $CH_3$ | OH | Cl |
| H | amino acid | $CH_3$ | OH | Br |
| H | amino acid | $CH_3$ | OH | I |
| amino acid | amino acid | $CH_3$ | OH | H |
| amino acid | amino acid | $CH_3$ | OH | $NH_2$ |
| amino acid | amino acid | $CH_3$ | OH | NH-cyclopropyl |
| amino acid | amino acid | $CH_3$ | OH | NH-methyl |
| amino acid | amino acid | $CH_3$ | OH | NH-ethyl |
| amino acid | amino acid | $CH_3$ | OH | NH-acetyl |
| amino acid | amino acid | $CH_3$ | OH | OH |
| amino acid | amino acid | $CH_3$ | OH | OMe |
| amino acid | amino acid | $CH_3$ | OH | OEt |
| amino acid | amino acid | $CH_3$ | OH | O-cyclopropyl |
| amino acid | amino acid | $CH_3$ | OH | O-acetyl |
| amino acid | amino acid | $CH_3$ | OH | SH |
| amino acid | amino acid | $CH_3$ | OH | SMe |
| amino acid | amino acid | $CH_3$ | OH | SEt |
| amino acid | amino acid | $CH_3$ | OH | S-cyclopropyl |
| amino acid | amino acid | $CH_3$ | OH | F |
| amino acid | amino acid | $CH_3$ | OH | Cl |
| amino acid | amino acid | $CH_3$ | OH | Br |
| amino acid | amino acid | $CH_3$ | OH | I |
| amino acid | H | $CH_3$ | OH | H |
| amino acid | H | $CH_3$ | OH | $NH_2$ |
| amino acid | H | $CH_3$ | OH | NH-cyclopropyl |
| amino acid | H | $CH_3$ | OH | NH-methyl |
| amino acid | H | $CH_3$ | OH | NH-ethyl |
| amino acid | H | $CH_3$ | OH | NH-acetyl |
| amino acid | H | $CH_3$ | OH | OH |
| amino acid | H | $CH_3$ | OH | OMe |
| amino acid | H | $CH_3$ | OH | OEt |
| amino acid | H | $CH_3$ | OH | O-cyclopropyl |
| amino acid | H | $CH_3$ | OH | O-acetyl |
| amino acid | H | $CH_3$ | OH | SH |
| amino acid | H | $CH_3$ | OH | SMe |
| amino acid | H | $CH_3$ | OH | SEt |
| amino acid | H | $CH_3$ | OH | S-cyclopropyl |
| amino acid | H | $CH_3$ | OH | F |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | $CH_3$ | OH | Cl |
| amino acid | H | $CH_3$ | OH | Br |
| amino acid | H | $CH_3$ | OH | I |
| amino acid | acyl | $CH_3$ | OH | H |
| amino acid | acyl | $CH_3$ | OH | $NH_2$ |
| amino acid | acyl | $CH_3$ | OH | NH-cyclopropyl |
| amino acid | acyl | $CH_3$ | OH | NH-methyl |
| amino acid | acyl | $CH_3$ | OH | NH-ethyl |
| amino acid | acyl | $CH_3$ | OH | NH-acetyl |
| amino acid | acyl | $CH_3$ | OH | OH |
| amino acid | acyl | $CH_3$ | OH | OMe |
| amino acid | acyl | $CH_3$ | OH | OEt |
| amino acid | acyl | $CH_3$ | OH | O-cyclopropyl |
| amino acid | acyl | $CH_3$ | OH | O-acetyl |
| amino acid | acyl | $CH_3$ | OH | SH |
| amino acid | acyl | $CH_3$ | OH | SMe |
| amino acid | acyl | $CH_3$ | OH | SEt |
| amino acid | acyl | $CH_3$ | OH | S-cyclopropyl |
| amino acid | acyl | $CH_3$ | OH | F |
| amino acid | acyl | $CH_3$ | OH | Cl |
| amino acid | acyl | $CH_3$ | OH | Br |
| amino acid | acyl | $CH_3$ | OH | I |
| acyl | H | $CF_3$ | OH | H |
| acyl | H | $CF_3$ | OH | $NH_2$ |
| acyl | H | $CF_3$ | OH | NH-cyclopropyl |
| acyl | H | $CF_3$ | OH | NH-methyl |
| acyl | H | $CF_3$ | OH | NH-ethyl |
| acyl | H | $CF_3$ | OH | NH-acetyl |
| acyl | H | $CF_3$ | OH | OH |
| acyl | H | $CF_3$ | OH | OMe |
| acyl | H | $CF_3$ | OH | OEt |
| acyl | H | $CF_3$ | OH | O-cyclopropyl |
| acyl | H | $CF_3$ | OH | O-acetyl |
| acyl | H | $CF_3$ | OH | SH |
| acyl | H | $CF_3$ | OH | SMe |
| acyl | H | $CF_3$ | OH | SEt |
| acyl | H | $CF_3$ | OH | S-cyclopropyl |
| acyl | H | $CF_3$ | OH | F |
| acyl | H | $CF_3$ | OH | Cl |
| acyl | H | $CF_3$ | OH | Br |
| acyl | H | $CF_3$ | OH | I |
| acyl | acyl | $CF_3$ | OH | H |
| acyl | acyl | $CF_3$ | OH | $NH_2$ |
| acyl | acyl | $CF_3$ | OH | NH-cyclopropyl |
| acyl | acyl | $CF_3$ | OH | NH-methyl |
| acyl | acyl | $CF_3$ | OH | NH-ethyl |
| acyl | acyl | $CF_3$ | OH | NH-acetyl |
| acyl | acyl | $CF_3$ | OH | OH |
| acyl | acyl | $CF_3$ | OH | OMe |
| acyl | acyl | $CF_3$ | OH | OEt |
| acyl | acyl | $CF_3$ | OH | O-cyclopropyl |
| acyl | acyl | $CF_3$ | OH | O-acetyl |
| acyl | acyl | $CF_3$ | OH | SH |
| acyl | acyl | $CF_3$ | OH | SMe |
| acyl | acyl | $CF_3$ | OH | SEt |
| acyl | acyl | $CF_3$ | OH | S-cyclopropyl |
| acyl | acyl | $CF_3$ | OH | F |
| acyl | acyl | $CF_3$ | OH | Cl |
| acyl | acyl | $CF_3$ | OH | Br |
| acyl | acyl | $CF_3$ | OH | I |
| acyl | amino acid | $CF_3$ | OH | H |
| acyl | amino acid | $CF_3$ | OH | $NH_2$ |
| acyl | amino acid | $CF_3$ | OH | NH-cyclopropyl |
| acyl | amino acid | $CF_3$ | OH | NH-methyl |
| acyl | amino acid | $CF_3$ | OH | NH-ethyl |
| acyl | amino acid | $CF_3$ | OH | NH-acetyl |
| acyl | amino acid | $CF_3$ | OH | OH |
| acyl | amino acid | $CF_3$ | OH | OMe |
| acyl | amino acid | $CF_3$ | OH | OEt |
| acyl | amino acid | $CF_3$ | OH | O-cyclopropyl |
| acyl | amino acid | $CF_3$ | OH | O-acetyl |
| acyl | amino acid | $CF_3$ | OH | SH |
| acyl | amino acid | $CF_3$ | OH | SMe |
| acyl | amino acid | $CF_3$ | OH | SEt |
| acyl | amino acid | $CF_3$ | OH | S-cyclopropyl |
| acyl | amino acid | $CF_3$ | OH | F |
| acyl | amino acid | $CF_3$ | OH | Cl |
| acyl | amino acid | $CF_3$ | OH | Br |
| acyl | amino acid | $CF_3$ | OH | I |
| amino acid | H | $CF_3$ | OH | H |
| amino acid | H | $CF_3$ | OH | $NH_2$ |
| amino acid | H | $CF_3$ | OH | NH-cyclopropyl |
| amino acid | H | $CF_3$ | OH | NH-methyl |
| amino acid | H | $CF_3$ | OH | NH-ethyl |
| amino acid | H | $CF_3$ | OH | NH-acetyl |
| amino acid | H | $CF_3$ | OH | OH |
| amino acid | H | $CF_3$ | OH | OMe |
| amino acid | H | $CF_3$ | OH | OEt |
| amino acid | H | $CF_3$ | OH | O-cyclopropyl |
| amino acid | H | $CF_3$ | OH | O-acetyl |
| amino acid | H | $CF_3$ | OH | SH |
| amino acid | H | $CF_3$ | OH | SMe |
| amino acid | H | $CF_3$ | OH | SEt |
| amino acid | H | $CF_3$ | OH | S-cyclopropyl |
| amino acid | H | $CF_3$ | OH | F |
| amino acid | H | $CF_3$ | OH | Cl |
| amino acid | H | $CF_3$ | OH | Br |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | amino acid | $CF_3$ | OH | Br |
| acyl | amino acid | $CF_3$ | OH | I |
| H | acyl | $CF_3$ | OH | H |
| H | acyl | $CF_3$ | OH | $NH_2$ |
| H | acyl | $CF_3$ | OH | NH-cyclopropyl |
| H | acyl | $CF_3$ | OH | NH-methyl |
| H | acyl | $CF_3$ | OH | NH-ethyl |
| H | acyl | $CF_3$ | OH | NH-acetyl |
| H | acyl | $CF_3$ | OH | OH |
| H | acyl | $CF_3$ | OH | OMe |
| H | acyl | $CF_3$ | OH | OEt |
| H | acyl | $CF_3$ | OH | O-cyclopropyl |
| H | acyl | $CF_3$ | OH | O-acetyl |
| H | acyl | $CF_3$ | OH | SH |
| H | acyl | $CF_3$ | OH | SMe |
| H | acyl | $CF_3$ | OH | SEt |
| H | acyl | $CF_3$ | OH | S-cyclopropyl |
| H | acyl | $CF_3$ | OH | F |
| H | acyl | $CF_3$ | OH | Cl |
| H | acyl | $CF_3$ | OH | Br |
| H | acyl | $CF_3$ | OH | I |
| H | amino acid | $CF_3$ | OH | H |
| H | amino acid | $CF_3$ | OH | $NH_2$ |
| H | amino acid | $CF_3$ | OH | NH-cyclopropyl |
| H | amino acid | $CF_3$ | OH | NH-methyl |
| H | amino acid | $CF_3$ | OH | NH-ethyl |
| H | amino acid | $CF_3$ | OH | NH-acetyl |
| H | amino acid | $CF_3$ | OH | OH |
| H | amino acid | $CF_3$ | OH | OMe |
| H | amino acid | $CF_3$ | OH | OEt |
| H | amino acid | $CF_3$ | OH | O-cyclopropyl |
| H | amino acid | $CF_3$ | OH | O-acetyl |
| H | amino acid | $CF_3$ | OH | SH |
| H | amino acid | $CF_3$ | OH | SMe |
| H | amino acid | $CF_3$ | OH | SEt |
| H | amino acid | $CF_3$ | OH | S-cyclopropyl |
| H | amino acid | $CF_3$ | OH | F |
| H | amino acid | $CF_3$ | OH | Cl |
| H | amino acid | $CF_3$ | OH | Br |
| H | amino acid | $CF_3$ | OH | I |
| amino acid | amino acid | $CF_3$ | OH | H |
| amino acid | amino acid | $CF_3$ | OH | $NH_2$ |
| amino acid | amino acid | $CF_3$ | OH | NH-cyclopropyl |
| amino acid | amino acid | $CF_3$ | OH | NH-methyl |
| amino acid | amino acid | $CF_3$ | OH | NH-ethyl |
| amino acid | amino acid | $CF_3$ | OH | NH-acetyl |
| amino acid | amino acid | $CF_3$ | OH | OH |
| amino acid | amino acid | $CF_3$ | OH | OMe |
| amino acid | amino acid | $CF_3$ | OH | OEt |
| amino acid | amino acid | $CF_3$ | OH | O-cyclopropyl |
| amino acid | amino acid | $CF_3$ | OH | O-acetyl |
| amino acid | amino acid | $CF_3$ | OH | SH |
| amino acid | amino acid | $CF_3$ | OH | SMe |
| amino acid | amino acid | $CF_3$ | OH | SEt |
| amino acid | amino acid | $CF_3$ | OH | S-cyclopropyl |
| amino acid | amino acid | $CF_3$ | OH | F |
| amino acid | amino acid | $CF_3$ | OH | Cl |
| amino acid | amino acid | $CF_3$ | OH | Br |
| amino acid | amino acid | $CF_3$ | OH | I |
| amino acid | H | $CF_3$ | OH | H |
| amino acid | H | $CF_3$ | OH | $NH_2$ |
| amino acid | H | $CF_3$ | OH | NH-cyclopropyl |
| amino acid | H | $CF_3$ | OH | NH-methyl |
| amino acid | H | $CF_3$ | OH | NH-ethyl |
| amino acid | H | $CF_3$ | OH | NH-acetyl |
| amino acid | H | $CF_3$ | OH | OH |
| amino acid | H | $CF_3$ | OH | OMe |
| amino acid | H | $CF_3$ | OH | OEt |
| amino acid | H | $CF_3$ | OH | O-cyclopropyl |
| amino acid | H | $CF_3$ | OH | O-acetyl |
| amino acid | H | $CF_3$ | OH | SH |
| amino acid | H | $CF_3$ | OH | SMe |
| amino acid | H | $CF_3$ | OH | SEt |
| amino acid | H | $CF_3$ | OH | S-cyclopropyl |
| amino acid | H | $CF_3$ | OH | F |
| amino acid | H | $CF_3$ | OH | Cl |
| amino acid | H | $CF_3$ | OH | Br |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | H | $CF_3$ | OH | I |
| amino acid | acyl | $CF_3$ | OH | H |
| amino acid | acyl | $CF_3$ | OH | $NH_2$ |
| amino acid | acyl | $CF_3$ | OH | NH-cyclopropyl |
| amino acid | acyl | $CF_3$ | OH | NH-methyl |
| amino acid | acyl | $CF_3$ | OH | NH-ethyl |
| amino acid | acyl | $CF_3$ | OH | NH-acetyl |
| amino acid | acyl | $CF_3$ | OH | OH |
| amino acid | acyl | $CF_3$ | OH | OMe |
| amino acid | acyl | $CF_3$ | OH | OEt |
| amino acid | acyl | $CF_3$ | OH | O-cyclopropyl |
| amino acid | acyl | $CF_3$ | OH | O-acetyl |
| amino acid | acyl | $CF_3$ | OH | SH |
| amino acid | acyl | $CF_3$ | OH | SMe |
| amino acid | acyl | $CF_3$ | OH | SEt |
| amino acid | acyl | $CF_3$ | OH | S-cyclopropyl |
| amino acid | acyl | $CF_3$ | OH | F |
| amino acid | acyl | $CF_3$ | OH | Cl |
| amino acid | acyl | $CF_3$ | OH | Br |
| amino acid | acyl | $CF_3$ | OH | I |
| acyl | H | Br | OH | H |
| acyl | H | Br | OH | $NH_2$ |
| acyl | H | Br | OH | NH-cyclopropyl |
| acyl | H | Br | OH | NH-methyl |
| acyl | H | Br | OH | NH-ethyl |
| acyl | H | Br | OH | NH-acetyl |
| acyl | H | Br | OH | OH |
| acyl | H | Br | OH | OMe |
| acyl | H | Br | OH | OEt |
| acyl | H | Br | OH | O-cyclopropyl |
| acyl | H | Br | OH | O-acetyl |
| acyl | H | Br | OH | SH |
| acyl | H | Br | OH | SMe |
| acyl | H | Br | OH | SEt |
| acyl | H | Br | OH | S-cyclopropyl |
| acyl | H | Br | OH | F |
| acyl | H | Br | OH | Cl |
| acyl | H | Br | OH | Br |
| acyl | H | Br | OH | I |
| acyl | acyl | Br | OH | H |
| acyl | acyl | Br | OH | $NH_2$ |
| acyl | acyl | Br | OH | NH-cyclopropyl |
| acyl | acyl | Br | OH | NH-methyl |
| acyl | acyl | Br | OH | NH-ethyl |
| acyl | acyl | Br | OH | NH-acetyl |
| acyl | acyl | Br | OH | OH |
| acyl | acyl | Br | OH | OMe |
| acyl | acyl | Br | OH | OEt |
| acyl | acyl | Br | OH | O-cyclopropyl |
| acyl | acyl | Br | OH | O-acetyl |
| acyl | acyl | Br | OH | SH |
| acyl | acyl | Br | OH | SMe |
| acyl | acyl | Br | OH | SEt |
| acyl | acyl | Br | OH | S-cyclopropyl |
| acyl | acyl | Br | OH | F |
| acyl | acyl | Br | OH | Cl |
| acyl | acyl | Br | OH | Br |
| acyl | acyl | Br | OH | I |
| acyl | amino acid | Br | OH | H |
| acyl | amino acid | Br | OH | $NH_2$ |
| acyl | amino acid | Br | OH | NH-cyclopropyl |
| acyl | amino acid | Br | OH | NH-methyl |
| acyl | amino acid | Br | OH | NH-ethyl |
| acyl | amino acid | Br | OH | NH-acetyl |
| acyl | amino acid | Br | OH | OH |
| acyl | amino acid | Br | OH | OMe |
| acyl | amino acid | Br | OH | OEt |
| acyl | amino acid | Br | OH | O-cyclopropyl |
| acyl | amino acid | Br | OH | O-acetyl |
| acyl | amino acid | Br | OH | SH |
| acyl | amino acid | Br | OH | SMe |
| acyl | amino acid | Br | OH | SEt |
| acyl | amino acid | Br | OH | S-cyclopropyl |
| acyl | amino acid | Br | OH | F |
| acyl | amino acid | Br | OH | Cl |
| acyl | amino acid | Br | OH | Br |
| acyl | amino acid | Br | OH | I |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | Br | OH | H |
| H | acyl | Br | OH | $NH_2$ |
| H | acyl | Br | OH | NH-cyclopropyl |
| H | acyl | Br | OH | NH-methyl |
| H | acyl | Br | OH | NH-ethyl |
| H | acyl | Br | OH | NH-acetyl |
| H | acyl | Br | OH | OH |
| H | acyl | Br | OH | OMe |
| H | acyl | Br | OH | OEt |
| H | acyl | Br | OH | O-cyclopropyl |
| H | acyl | Br | OH | O-acetyl |
| H | acyl | Br | OH | SH |
| H | acyl | Br | OH | SMe |
| H | acyl | Br | OH | SEt |
| H | acyl | Br | OH | S-cyclopropyl |
| H | acyl | Br | OH | F |
| H | acyl | Br | OH | Cl |
| H | acyl | Br | OH | Br |
| H | acyl | Br | OH | I |
| H | amino acid | Br | OH | H |
| H | amino acid | Br | OH | $NH_2$ |
| H | amino acid | Br | OH | NH-cyclopropyl |
| H | amino acid | Br | OH | NH-methyl |
| H | amino acid | Br | OH | NH-ethyl |
| H | amino acid | Br | OH | NH-acetyl |
| H | amino acid | Br | OH | OH |
| H | amino acid | Br | OH | OMe |
| H | amino acid | Br | OH | OEt |
| H | amino acid | Br | OH | O-cyclopropyl |
| H | amino acid | Br | OH | O-acetyl |
| H | amino acid | Br | OH | SH |
| H | amino acid | Br | OH | SMe |
| H | amino acid | Br | OH | SEt |
| H | amino acid | Br | OH | S-cyclopropyl |
| H | amino acid | Br | OH | F |
| H | amino acid | Br | OH | Cl |
| H | amino acid | Br | OH | Br |
| H | amino acid | Br | OH | I |
| amino acid | amino acid | Br | OH | H |
| amino acid | amino acid | Br | OH | $NH_2$ |
| amino acid | amino acid | Br | OH | NH-cyclopropyl |
| amino acid | amino acid | Br | OH | NH-methyl |
| amino acid | amino acid | Br | OH | NH-ethyl |
| amino acid | amino acid | Br | OH | NH-acetyl |
| amino acid | amino acid | Br | OH | OH |
| amino acid | amino acid | Br | OH | OMe |
| amino acid | amino acid | Br | OH | OEt |
| amino acid | amino acid | Br | OH | O-cyclopropyl |
| amino acid | amino acid | Br | OH | O-acetyl |
| amino acid | amino acid | Br | OH | SH |
| amino acid | amino acid | Br | OH | SMe |
| amino acid | amino acid | Br | OH | SEt |
| amino acid | amino acid | Br | OH | S-cyclopropyl |
| amino acid | amino acid | Br | OH | F |
| amino acid | amino acid | Br | OH | Cl |
| amino acid | amino acid | Br | OH | Br |
| amino acid | amino acid | Br | OH | I |
| amino acid | H | Br | OH | H |
| amino acid | H | Br | OH | $NH_2$ |
| amino acid | H | Br | OH | NH-cyclopropyl |
| amino acid | H | Br | OH | NH-methyl |
| amino acid | H | Br | OH | NH-ethyl |
| amino acid | H | Br | OH | NH-acetyl |
| amino acid | H | Br | OH | OH |
| amino acid | H | Br | OH | OMe |
| amino acid | H | Br | OH | OEt |
| amino acid | H | Br | OH | O-cyclopropyl |
| amino acid | H | Br | OH | O-acetyl |
| amino acid | H | Br | OH | SH |
| amino acid | H | Br | OH | SMe |
| amino acid | H | Br | OH | SEt |
| amino acid | H | Br | OH | S-cyclopropyl |
| amino acid | H | Br | OH | F |
| amino acid | H | Br | OH | Cl |
| amino acid | H | Br | OH | Br |
| amino acid | H | Br | OH | I |
| amino acid | acyl | Br | OH | H |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | Br | OH | $NH_2$ |
| amino acid | acyl | Br | OH | NH-cyclopropyl |
| amino acid | acyl | Br | OH | NH-methyl |
| amino acid | acyl | Br | OH | NH-ethyl |
| amino acid | acyl | Br | OH | NH-acetyl |
| amino acid | acyl | Br | OH | OH |
| amino acid | acyl | Br | OH | OMe |
| amino acid | acyl | Br | OH | OEt |
| amino acid | acyl | Br | OH | O-cyclopropyl |
| amino acid | acyl | Br | OH | O-acetyl |
| amino acid | acyl | Br | OH | SH |
| amino acid | acyl | Br | OH | SMe |
| amino acid | acyl | Br | OH | SEt |
| amino acid | acyl | Br | OH | S-cyclopropyl |
| amino acid | acyl | Br | OH | F |
| amino acid | acyl | Br | OH | Cl |
| amino acid | acyl | Br | OH | Br |
| amino acid | acyl | Br | OH | I |
| acyl | H | Cl | OH | H |
| acyl | H | Cl | OH | $NH_2$ |
| acyl | H | Cl | OH | NH-cyclopropyl |
| acyl | H | Cl | OH | NH-methyl |
| acyl | H | Cl | OH | NH-ethyl |
| acyl | H | Cl | OH | NH-acetyl |
| acyl | H | Cl | OH | OH |
| acyl | H | Cl | OH | OMe |
| acyl | H | Cl | OH | OEt |
| acyl | H | Cl | OH | O-cyclopropyl |
| acyl | H | Cl | OH | O-acetyl |
| acyl | H | Cl | OH | SH |
| acyl | H | Cl | OH | SMe |
| acyl | H | Cl | OH | SEt |
| acyl | H | Cl | OH | S-cyclopropyl |
| acyl | H | Cl | OH | F |
| acyl | H | Cl | OH | Cl |
| acyl | H | Cl | OH | Br |
| acyl | H | Cl | OH | I |
| acyl | acyl | Cl | OH | H |
| acyl | acyl | Cl | OH | $NH_2$ |
| acyl | acyl | Cl | OH | NH-cyclopropyl |
| acyl | acyl | Cl | OH | NH-methyl |
| acyl | acyl | Cl | OH | NH-ethyl |
| acyl | acyl | Cl | OH | NH-acetyl |
| acyl | acyl | Cl | OH | OH |
| acyl | acyl | Cl | OH | OMe |
| acyl | acyl | Cl | OH | OEt |
| acyl | acyl | Cl | OH | O-cyclopropyl |
| acyl | acyl | Cl | OH | O-acetyl |
| acyl | acyl | Cl | OH | SH |
| acyl | acyl | Cl | OH | SMe |
| acyl | acyl | Cl | OH | SEt |
| acyl | acyl | Cl | OH | S-cyclopropyl |
| acyl | acyl | Cl | OH | F |
| acyl | acyl | Cl | OH | Cl |
| acyl | acyl | Cl | OH | Br |
| acyl | acyl | Cl | OH | I |
| acyl | amino acid | Cl | OH | H |
| acyl | amino acid | Cl | OH | $NH_2$ |
| acyl | amino acid | Cl | OH | NH-cyclopropyl |
| acyl | amino acid | Cl | OH | NH-methyl |
| acyl | amino acid | Cl | OH | NH-ethyl |
| acyl | amino acid | Cl | OH | NH-acetyl |
| acyl | amino acid | Cl | OH | OH |
| acyl | amino acid | Cl | OH | OMe |
| acyl | amino acid | Cl | OH | OEt |
| acyl | amino acid | Cl | OH | O-cyclopropyl |
| acyl | amino acid | Cl | OH | O-acetyl |
| acyl | amino acid | Cl | OH | SH |
| acyl | amino acid | Cl | OH | SMe |
| acyl | amino acid | Cl | OH | SEt |
| acyl | amino acid | Cl | OH | S-cyclopropyl |
| acyl | amino acid | Cl | OH | F |
| acyl | amino acid | Cl | OH | Cl |
| acyl | amino acid | Cl | OH | Br |
| acyl | amino acid | Cl | OH | I |
| H | acyl | Cl | OH | H |
| H | acyl | Cl | OH | $NH_2$ |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | Cl | OH | NH-cyclopropyl |
| H | acyl | Cl | OH | NH-methyl |
| H | acyl | Cl | OH | NH-ethyl |
| H | acyl | Cl | OH | NH-acetyl |
| H | acyl | Cl | OH | OH |
| H | acyl | Cl | OH | OMe |
| H | acyl | Cl | OH | OEt |
| H | acyl | Cl | OH | O-cyclopropyl |
| H | acyl | Cl | OH | O-acetyl |
| H | acyl | Cl | OH | SH |
| H | acyl | Cl | OH | SMe |
| H | acyl | Cl | OH | SEt |
| H | acyl | Cl | OH | S-cyclopropyl |
| H | acyl | Cl | OH | F |
| H | acyl | Cl | OH | Cl |
| H | acyl | Cl | OH | Br |
| H | acyl | Cl | OH | I |
| H | amino acid | Cl | OH | H |
| H | amino acid | Cl | OH | $NH_2$ |
| H | amino acid | Cl | OH | NH-cyclopropyl |
| H | amino acid | Cl | OH | NH-methyl |
| H | amino acid | Cl | OH | NH-ethyl |
| H | amino acid | Cl | OH | NH-acetyl |
| H | amino acid | Cl | OH | OH |
| H | amino acid | Cl | OH | OMe |
| H | amino acid | Cl | OH | OEt |
| H | amino acid | Cl | OH | O-cyclopropyl |
| H | amino acid | Cl | OH | O-acetyl |
| H | amino acid | Cl | OH | SH |
| H | amino acid | Cl | OH | SMe |
| H | amino acid | Cl | OH | SEt |
| H | amino acid | Cl | OH | S-cyclopropyl |
| H | amino acid | Cl | OH | F |
| H | amino acid | Cl | OH | Cl |
| H | amino acid | Cl | OH | Br |
| H | amino acid | Cl | OH | I |
| amino acid | amino acid | Cl | OH | H |
| amino acid | amino acid | Cl | OH | $NH_2$ |
| amino acid | amino acid | Cl | OH | NH-cyclopropyl |
| amino acid | amino acid | Cl | OH | NH-methyl |
| amino acid | amino acid | Cl | OH | NH-ethyl |
| amino acid | amino acid | Cl | OH | NH-acetyl |
| amino acid | amino acid | Cl | OH | OH |
| amino acid | amino acid | Cl | OH | OMe |
| amino acid | amino acid | Cl | OH | OEt |
| amino acid | amino acid | Cl | OH | O-cyclopropyl |
| amino acid | amino acid | Cl | OH | O-acetyl |
| amino acid | amino acid | Cl | OH | SH |
| amino acid | amino acid | Cl | OH | SMe |
| amino acid | amino acid | Cl | OH | SEt |
| amino acid | amino acid | Cl | OH | S-cyclopropyl |
| amino acid | amino acid | Cl | OH | F |
| amino acid | amino acid | Cl | OH | Cl |
| amino acid | amino acid | Cl | OH | Br |
| amino acid | amino acid | Cl | OH | I |
| amino acid | H | Cl | OH | H |
| amino acid | H | Cl | OH | $NH_2$ |
| amino acid | H | Cl | OH | NH-cyclopropyl |
| amino acid | H | Cl | OH | NH-methyl |
| amino acid | H | Cl | OH | NH-ethyl |
| amino acid | H | Cl | OH | NH-acetyl |
| amino acid | H | Cl | OH | OH |
| amino acid | H | Cl | OH | OMe |
| amino acid | H | Cl | OH | OEt |
| amino acid | H | Cl | OH | O-cyclopropyl |
| amino acid | H | Cl | OH | O-acetyl |
| amino acid | H | Cl | OH | SH |
| amino acid | H | Cl | OH | SMe |
| amino acid | H | Cl | OH | SEt |
| amino acid | H | Cl | OH | S-cyclopropyl |
| amino acid | H | Cl | OH | F |
| amino acid | H | Cl | OH | Cl |
| amino acid | H | Cl | OH | Br |
| amino acid | H | Cl | OH | I |
| amino acid | acyl | Cl | OH | H |
| amino acid | acyl | Cl | OH | $NH_2$ |
| amino acid | acyl | Cl | OH | NH-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | Cl | OH | NH-methyl |
| amino acid | acyl | Cl | OH | NH-ethyl |
| amino acid | acyl | Cl | OH | NH-acetyl |
| amino acid | acyl | Cl | OH | OH |
| amino acid | acyl | Cl | OH | OMe |
| amino acid | acyl | Cl | OH | OEt |
| amino acid | acyl | Cl | OH | O-cyclopropyl |
| amino acid | acyl | Cl | OH | O-acetyl |
| amino acid | acyl | Cl | OH | SH |
| amino acid | acyl | Cl | OH | SMe |
| amino acid | acyl | Cl | OH | SEt |
| amino acid | acyl | Cl | OH | S-cyclopropyl |
| amino acid | acyl | Cl | OH | F |
| amino acid | acyl | Cl | OH | Cl |
| amino acid | acyl | Cl | OH | Br |
| amino acid | acyl | Cl | OH | I |
| acyl | H | F | OH | H |
| acyl | H | F | OH | $NH_2$ |
| acyl | H | F | OH | NH-cyclopropyl |
| acyl | H | F | OH | NH-methyl |
| acyl | H | F | OH | NH-ethyl |
| acyl | H | F | OH | NH-acetyl |
| acyl | H | F | OH | OH |
| acyl | H | F | OH | OMe |
| acyl | H | F | OH | OEt |
| acyl | H | F | OH | O-cyclopropyl |
| acyl | H | F | OH | O-acetyl |
| acyl | H | F | OH | SH |
| acyl | H | F | OH | SMe |
| acyl | H | F | OH | SEt |
| acyl | H | F | OH | S-cyclopropyl |
| acyl | H | F | OH | F |
| acyl | H | F | OH | Cl |
| acyl | H | F | OH | Br |
| acyl | H | F | OH | I |
| acyl | acyl | F | OH | H |
| acyl | acyl | F | OH | $NH_2$ |
| acyl | acyl | F | OH | NH-cyclopropyl |
| acyl | acyl | F | OH | NH-methyl |
| acyl | acyl | F | OH | NH-ethyl |
| acyl | acyl | F | OH | NH-acetyl |
| acyl | acyl | F | OH | OH |
| acyl | acyl | F | OH | OMe |
| acyl | acyl | F | OH | OEt |
| acyl | acyl | F | OH | O-cyclopropyl |
| acyl | acyl | F | OH | O-acetyl |
| acyl | acyl | F | OH | SH |
| acyl | acyl | F | OH | SMe |
| acyl | acyl | F | OH | SEt |
| acyl | acyl | F | OH | S-cyclopropyl |
| acyl | acyl | F | OH | F |
| acyl | acyl | F | OH | Cl |
| acyl | acyl | F | OH | Br |
| acyl | acyl | F | OH | I |
| acyl | amino acid | F | OH | H |
| acyl | amino acid | F | OH | $NH_2$ |
| acyl | amino acid | F | OH | NH-cyclopropyl |
| acyl | amino acid | F | OH | NH-methyl |
| acyl | amino acid | F | OH | NH-ethyl |
| acyl | amino acid | F | OH | NH-acetyl |
| acyl | amino acid | F | OH | OH |
| acyl | amino acid | F | OH | OMe |
| acyl | amino acid | F | OH | OEt |
| acyl | amino acid | F | OH | O-cyclopropyl |
| acyl | amino acid | F | OH | O-acetyl |
| acyl | amino acid | F | OH | SH |
| acyl | amino acid | F | OH | SMe |
| acyl | amino acid | F | OH | SEt |
| acyl | amino acid | F | OH | S-cyclopropyl |
| acyl | amino acid | F | OH | F |
| acyl | amino acid | F | OH | Cl |
| acyl | amino acid | F | OH | Br |
| acyl | amino acid | F | OH | I |
| H | acyl | F | OH | H |
| H | acyl | F | OH | $NH_2$ |
| H | acyl | F | OH | NH-cyclopropyl |
| H | acyl | F | OH | NH-methyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | F | OH | NH-ethyl |
| H | acyl | F | OH | NH-acetyl |
| H | acyl | F | OH | OH |
| H | acyl | F | OH | OMe |
| H | acyl | F | OH | OEt |
| H | acyl | F | OH | O-cyclopropyl |
| H | acyl | F | OH | O-acetyl |
| H | acyl | F | OH | SH |
| H | acyl | F | OH | SMe |
| H | acyl | F | OH | SEt |
| H | acyl | F | OH | S-cyclopropyl |
| H | acyl | F | OH | F |
| H | acyl | F | OH | Cl |
| H | acyl | F | OH | Br |
| H | acyl | F | OH | I |
| H | amino acid | F | OH | H |
| H | amino acid | F | OH | $NH_2$ |
| H | amino acid | F | OH | NH-cyclopropyl |
| H | amino acid | F | OH | NH-methyl |
| H | amino acid | F | OH | NH-ethyl |
| H | amino acid | F | OH | NH-acetyl |
| H | amino acid | F | OH | OH |
| H | amino acid | F | OH | OMe |
| H | amino acid | F | OH | OEt |
| H | amino acid | F | OH | O-cyclopropyl |
| H | amino acid | F | OH | O-acetyl |
| H | amino acid | F | OH | SH |
| H | amino acid | F | OH | SMe |
| H | amino acid | F | OH | SEt |
| H | amino acid | F | OH | S-cyclopropyl |
| H | amino acid | F | OH | F |
| H | amino acid | F | OH | Cl |
| H | amino acid | F | OH | Br |
| H | amino acid | F | OH | I |
| amino acid | amino acid | F | OH | H |
| amino acid | amino acid | F | OH | $NH_2$ |
| amino acid | amino acid | F | OH | NH-cyclopropyl |
| amino acid | amino acid | F | OH | NH-methyl |
| amino acid | amino acid | F | OH | NH-ethyl |
| amino acid | amino acid | F | OH | NH-acetyl |
| amino acid | amino acid | F | OH | OH |
| amino acid | amino acid | F | OH | OMe |
| amino acid | amino acid | F | OH | OEt |
| amino acid | amino acid | F | OH | O-cyclopropyl |
| amino acid | amino acid | F | OH | O-acetyl |
| amino acid | amino acid | F | OH | SH |
| amino acid | amino acid | F | OH | SMe |
| amino acid | amino acid | F | OH | SEt |
| amino acid | amino acid | F | OH | S-cyclopropyl |
| amino acid | amino acid | F | OH | F |
| amino acid | amino acid | F | OH | Cl |
| amino acid | amino acid | F | OH | Br |
| amino acid | amino acid | F | OH | I |
| amino acid | H | F | OH | H |
| amino acid | H | F | OH | $NH_2$ |
| amino acid | H | F | OH | NH-cyclopropyl |
| amino acid | H | F | OH | NH-methyl |
| amino acid | H | F | OH | NH-ethyl |
| amino acid | H | F | OH | NH-acetyl |
| amino acid | H | F | OH | OH |
| amino acid | H | F | OH | OMe |
| amino acid | H | F | OH | OEt |
| amino acid | H | F | OH | O-cyclopropyl |
| amino acid | H | F | OH | O-acetyl |
| amino acid | H | F | OH | SH |
| amino acid | H | F | OH | SMe |
| amino acid | H | F | OH | SEt |
| amino acid | H | F | OH | S-cyclopropyl |
| amino acid | H | F | OH | F |
| amino acid | H | F | OH | Cl |
| amino acid | H | F | OH | Br |
| amino acid | H | F | OH | I |
| amino acid | acyl | F | OH | H |
| amino acid | acyl | F | OH | $NH_2$ |
| amino acid | acyl | F | OH | NH-cyclopropyl |
| amino acid | acyl | F | OH | NH-methyl |
| amino acid | acyl | F | OH | NH-ethyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | F | OH | NH-acetyl |
| amino acid | acyl | F | OH | OH |
| amino acid | acyl | F | OH | OMe |
| amino acid | acyl | F | OH | OEt |
| amino acid | acyl | F | OH | O-cyclopropyl |
| amino acid | acyl | F | OH | O-acetyl |
| amino acid | acyl | F | OH | SH |
| amino acid | acyl | F | OH | SMe |
| amino acid | acyl | F | OH | SEt |
| amino acid | acyl | F | OH | S-cyclopropyl |
| amino acid | acyl | F | OH | F |
| amino acid | acyl | F | OH | Cl |
| amino acid | acyl | F | OH | Br |
| amino acid | acyl | F | OH | I |
| acyl | H | $NH_2$ | OH | H |
| acyl | H | $NH_2$ | OH | $NH_2$ |
| acyl | H | $NH_2$ | OH | NH-cyclopropyl |
| acyl | H | $NH_2$ | OH | NH-methyl |
| acyl | H | $NH_2$ | OH | NH-ethyl |
| acyl | H | $NH_2$ | OH | NH-acetyl |
| acyl | H | $NH_2$ | OH | OH |
| acyl | H | $NH_2$ | OH | OMe |
| acyl | H | $NH_2$ | OH | OEt |
| acyl | H | $NH_2$ | OH | O-cyclopropyl |
| acyl | H | $NH_2$ | OH | O-acetyl |
| acyl | H | $NH_2$ | OH | SH |
| acyl | H | $NH_2$ | OH | SMe |
| acyl | H | $NH_2$ | OH | SEt |
| acyl | H | $NH_2$ | OH | S-cyclopropyl |
| acyl | H | $NH_2$ | OH | F |
| acyl | H | $NH_2$ | OH | Cl |
| acyl | H | $NH_2$ | OH | Br |
| acyl | H | $NH_2$ | OH | I |
| acyl | acyl | $NH_2$ | OH | H |
| acyl | acyl | $NH_2$ | OH | $NH_2$ |
| acyl | acyl | $NH_2$ | OH | NH-cyclopropyl |
| acyl | acyl | $NH_2$ | OH | NH-methyl |
| acyl | acyl | $NH_2$ | OH | NH-ethyl |
| acyl | acyl | $NH_2$ | OH | NH-acetyl |
| acyl | acyl | $NH_2$ | OH | OH |
| acyl | acyl | $NH_2$ | OH | OMe |
| acyl | acyl | $NH_2$ | OH | OEt |
| acyl | acyl | $NH_2$ | OH | O-cyclopropyl |
| acyl | acyl | $NH_2$ | OH | O-acetyl |
| acyl | acyl | $NH_2$ | OH | SH |
| acyl | acyl | $NH_2$ | OH | SMe |
| acyl | acyl | $NH_2$ | OH | SEt |
| acyl | acyl | $NH_2$ | OH | S-cyclopropyl |
| acyl | acyl | $NH_2$ | OH | F |
| acyl | acyl | $NH_2$ | OH | Cl |
| acyl | acyl | $NH_2$ | OH | Br |
| acyl | acyl | $NH_2$ | OH | I |
| acyl | amino acid | $NH_2$ | OH | H |
| acyl | amino acid | $NH_2$ | OH | $NH_2$ |
| acyl | amino acid | $NH_2$ | OH | NH-cyclopropyl |
| acyl | amino acid | $NH_2$ | OH | NH-methyl |
| acyl | amino acid | $NH_2$ | OH | NH-ethyl |
| acyl | amino acid | $NH_2$ | OH | NH-acetyl |
| acyl | amino acid | $NH_2$ | OH | OH |
| acyl | amino acid | $NH_2$ | OH | OMe |
| acyl | amino acid | $NH_2$ | OH | OEt |
| acyl | amino acid | $NH_2$ | OH | O-cyclopropyl |
| acyl | amino acid | $NH_2$ | OH | O-acetyl |
| acyl | amino acid | $NH_2$ | OH | SH |
| acyl | amino acid | $NH_2$ | OH | SMe |
| acyl | amino acid | $NH_2$ | OH | SEt |
| acyl | amino acid | $NH_2$ | OH | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | OH | F |
| acyl | amino acid | $NH_2$ | OH | Cl |
| acyl | amino acid | $NH_2$ | OH | Br |
| acyl | amino acid | $NH_2$ | OH | I |
| H | acyl | $NH_2$ | OH | H |
| H | acyl | $NH_2$ | OH | $NH_2$ |
| H | acyl | $NH_2$ | OH | NH-cyclopropyl |
| H | acyl | $NH_2$ | OH | NH-methyl |
| H | acyl | $NH_2$ | OH | NH-ethyl |
| H | acyl | $NH_2$ | OH | NH-acetyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | $NH_2$ | OH | OH |
| H | acyl | $NH_2$ | OH | OMe |
| H | acyl | $NH_2$ | OH | OEt |
| H | acyl | $NH_2$ | OH | O-cyclopropyl |
| H | acyl | $NH_2$ | OH | O-acetyl |
| H | acyl | $NH_2$ | OH | SH |
| H | acyl | $NH_2$ | OH | SMe |
| H | acyl | $NH_2$ | OH | SEt |
| H | acyl | $NH_2$ | OH | S-cyclopropyl |
| H | acyl | $NH_2$ | OH | F |
| H | acyl | $NH_2$ | OH | Cl |
| H | acyl | $NH_2$ | OH | Br |
| H | acyl | $NH_2$ | OH | I |
| H | amino acid | $NH_2$ | OH | H |
| H | amino acid | $NH_2$ | OH | $NH_2$ |
| H | amino acid | $NH_2$ | OH | NH-cyclopropyl |
| H | amino acid | $NH_2$ | OH | NH-methyl |
| H | amino acid | $NH_2$ | OH | NH-ethyl |
| H | amino acid | $NH_2$ | OH | NH-acetyl |
| H | amino acid | $NH_2$ | OH | OH |
| H | amino acid | $NH_2$ | OH | OMe |
| H | amino acid | $NH_2$ | OH | OEt |
| H | amino acid | $NH_2$ | OH | O-cyclopropyl |
| H | amino acid | $NH_2$ | OH | O-acetyl |
| H | amino acid | $NH_2$ | OH | SH |
| H | amino acid | $NH_2$ | OH | SMe |
| H | amino acid | $NH_2$ | OH | SEt |
| H | amino acid | $NH_2$ | OH | S-cyclopropyl |
| H | amino acid | $NH_2$ | OH | F |
| H | amino acid | $NH_2$ | OH | Cl |
| H | amino acid | $NH_2$ | OH | Br |
| H | amino acid | $NH_2$ | OH | I |
| amino acid | amino acid | $NH_2$ | OH | H |
| amino acid | amino acid | $NH_2$ | OH | $NH_2$ |
| amino acid | amino acid | $NH_2$ | OH | NH-cyclopropyl |
| amino acid | amino acid | $NH_2$ | OH | NH-methyl |
| amino acid | amino acid | $NH_2$ | OH | NH-ethyl |
| amino acid | amino acid | $NH_2$ | OH | NH-acetyl |
| amino acid | amino acid | $NH_2$ | OH | OH |
| amino acid | amino acid | $NH_2$ | OH | OMe |
| amino acid | amino acid | $NH_2$ | OH | OEt |
| amino acid | amino acid | $NH_2$ | OH | O-cyclopropyl |
| amino acid | amino acid | $NH_2$ | OH | O-acetyl |
| amino acid | amino acid | $NH_2$ | OH | SH |
| amino acid | amino acid | $NH_2$ | OH | SMe |
| amino acid | amino acid | $NH_2$ | OH | SEt |
| amino acid | amino acid | $NH_2$ | OH | S-cyclopropyl |
| amino acid | amino acid | $NH_2$ | OH | F |
| amino acid | amino acid | $NH_2$ | OH | Cl |
| amino acid | amino acid | $NH_2$ | OH | Br |
| amino acid | amino acid | $NH_2$ | OH | I |
| amino acid | H | $NH_2$ | OH | H |
| amino acid | H | $NH_2$ | OH | $NH_2$ |
| amino acid | H | $NH_2$ | OH | NH-cyclopropyl |
| amino acid | H | $NH_2$ | OH | NH-methyl |
| amino acid | H | $NH_2$ | OH | NH-ethyl |
| amino acid | H | $NH_2$ | OH | NH-acetyl |
| amino acid | H | $NH_2$ | OH | OH |
| amino acid | H | $NH_2$ | OH | OMe |
| amino acid | H | $NH_2$ | OH | OEt |
| amino acid | H | $NH_2$ | OH | O-cyclopropyl |
| amino acid | H | $NH_2$ | OH | O-acetyl |
| amino acid | H | $NH_2$ | OH | SH |
| amino acid | H | $NH_2$ | OH | SMe |
| amino acid | H | $NH_2$ | OH | SEt |
| amino acid | H | $NH_2$ | OH | S-cyclopropyl |
| amino acid | H | $NH_2$ | OH | F |
| amino acid | H | $NH_2$ | OH | Cl |
| amino acid | H | $NH_2$ | OH | Br |
| amino acid | H | $NH_2$ | OH | I |
| amino acid | acyl | $NH_2$ | OH | H |
| amino acid | acyl | $NH_2$ | OH | $NH_2$ |
| amino acid | acyl | $NH_2$ | OH | NH-cyclopropyl |
| amino acid | acyl | $NH_2$ | OH | NH-methyl |
| amino acid | acyl | $NH_2$ | OH | NH-ethyl |
| amino acid | acyl | $NH_2$ | OH | NH-acetyl |
| amino acid | acyl | $NH_2$ | OH | OH |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | $NH_2$ | OH | OMe |
| amino acid | acyl | $NH_2$ | OH | OEt |
| amino acid | acyl | $NH_2$ | OH | O-cyclopropyl |
| amino acid | acyl | $NH_2$ | OH | O-acetyl |
| amino acid | acyl | $NH_2$ | OH | SH |
| amino acid | acyl | $NH_2$ | OH | SMe |
| amino acid | acyl | $NH_2$ | OH | SEt |
| amino acid | acyl | $NH_2$ | OH | S-cyclopropyl |
| amino acid | acyl | $NH_2$ | OH | F |
| amino acid | acyl | $NH_2$ | OH | Cl |
| amino acid | acyl | $NH_2$ | OH | Br |
| amino acid | acyl | $NH_2$ | OH | I |
| acyl | H | SH | OH | H |
| acyl | H | SH | OH | $NH_2$ |
| acyl | H | SH | OH | NH-cyclopropyl |
| acyl | H | SH | OH | NH-methyl |
| acyl | H | SH | OH | NH-ethyl |
| acyl | H | SH | OH | NH-acetyl |
| acyl | H | SH | OH | OH |
| acyl | H | SH | OH | OMe |
| acyl | H | SH | OH | OEt |
| acyl | H | SH | OH | O-cyclopropyl |
| acyl | H | SH | OH | O-acetyl |
| acyl | H | SH | OH | SH |
| acyl | H | SH | OH | SMe |
| acyl | H | SH | OH | SEt |
| acyl | H | SH | OH | S-cyclopropyl |
| acyl | H | SH | OH | F |
| acyl | H | SH | OH | Cl |
| acyl | H | SH | OH | Br |
| acyl | H | SH | OH | I |
| acyl | acyl | SH | OH | H |
| acyl | acyl | SH | OH | $NH_2$ |
| acyl | acyl | SH | OH | NH-cyclopropyl |
| acyl | acyl | SH | OH | NH-methyl |
| acyl | acyl | SH | OH | NH-ethyl |
| acyl | acyl | SH | OH | NH-acetyl |
| acyl | acyl | SH | OH | OH |
| acyl | acyl | SH | OH | OMe |
| acyl | acyl | SH | OH | OEt |
| acyl | acyl | SH | OH | O-cyclopropyl |
| acyl | acyl | SH | OH | O-acetyl |
| acyl | acyl | SH | OH | SH |
| acyl | acyl | SH | OH | SMe |
| acyl | acyl | SH | OH | SEt |
| acyl | acyl | SH | OH | S-cyclopropyl |
| acyl | acyl | SH | OH | F |
| acyl | acyl | SH | OH | Cl |
| acyl | acyl | SH | OH | Br |
| acyl | acyl | SH | OH | I |
| acyl | amino acid | SH | OH | H |
| acyl | amino acid | SH | OH | $NH_2$ |
| acyl | amino acid | SH | OH | NH-cyclopropyl |
| acyl | amino acid | SH | OH | NH-methyl |
| acyl | amino acid | SH | OH | NH-ethyl |
| acyl | amino acid | SH | OH | NH-acetyl |
| acyl | amino acid | SH | OH | OH |
| acyl | amino acid | SH | OH | OMe |
| acyl | amino acid | SH | OH | OEt |
| acyl | amino acid | SH | OH | O-cyclopropyl |
| acyl | amino acid | SH | OH | O-acetyl |
| acyl | amino acid | SH | OH | SH |
| acyl | amino acid | SH | OH | SMe |
| acyl | amino acid | SH | OH | SEt |
| acyl | amino acid | SH | OH | S-cyclopropyl |
| acyl | amino acid | SH | OH | F |
| acyl | amino acid | SH | OH | Cl |
| acyl | amino acid | SH | OH | Br |
| acyl | amino acid | SH | OH | I |
| H | acyl | SH | OH | H |
| H | acyl | SH | OH | $NH_2$ |
| H | acyl | SH | OH | NH-cyclopropyl |
| H | acyl | SH | OH | NH-methyl |
| H | acyl | SH | OH | NH-ethyl |
| H | acyl | SH | OH | NH-acetyl |
| H | acyl | SH | OH | OH |
| H | acyl | SH | OH | OMe |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | SH | OH | OEt |
| H | acyl | SH | OH | O-cyclopropyl |
| H | acyl | SH | OH | O-acetyl |
| H | acyl | SH | OH | SH |
| H | acyl | SH | OH | SMe |
| H | acyl | SH | OH | SEt |
| H | acyl | SH | OH | S-cyclopropyl |
| H | acyl | SH | OH | F |
| H | acyl | SH | OH | Cl |
| H | acyl | SH | OH | Br |
| H | acyl | SH | OH | I |
| H | amino acid | SH | OH | H |
| H | amino acid | SH | OH | $NH_2$ |
| H | amino acid | SH | OH | NH-cyclopropyl |
| H | amino acid | SH | OH | NH-methyl |
| H | amino acid | SH | OH | NH-ethyl |
| H | amino acid | SH | OH | NH-acetyl |
| H | amino acid | SH | OH | OH |
| H | amino acid | SH | OH | OMe |
| H | amino acid | SH | OH | OEt |
| H | amino acid | SH | OH | O-cyclopropyl |
| H | amino acid | SH | OH | O-acetyl |
| H | amino acid | SH | OH | SH |
| H | amino acid | SH | OH | SMe |
| H | amino acid | SH | OH | SEt |
| H | amino acid | SH | OH | S-cyclopropyl |
| H | amino acid | SH | OH | F |
| H | amino acid | SH | OH | Cl |
| H | amino acid | SH | OH | Br |
| H | amino acid | SH | OH | I |
| amino acid | amino acid | SH | OH | H |
| amino acid | amino acid | SH | OH | $NH_2$ |
| amino acid | amino acid | SH | OH | NH-cyclopropyl |
| amino acid | amino acid | SH | OH | NH-methyl |
| amino acid | amino acid | SH | OH | NH-ethyl |
| amino acid | amino acid | SH | OH | NH-acetyl |
| amino acid | amino acid | SH | OH | OH |
| amino acid | amino acid | SH | OH | OMe |
| amino acid | amino acid | SH | OH | OEt |
| amino acid | amino acid | SH | OH | O-cyclopropyl |
| amino acid | amino acid | SH | OH | O-acetyl |
| amino acid | amino acid | SH | OH | SH |
| amino acid | amino acid | SH | OH | SMe |
| amino acid | amino acid | SH | OH | SEt |
| amino acid | amino acid | SH | OH | S-cyclopropyl |
| amino acid | amino acid | SH | OH | F |
| amino acid | amino acid | SH | OH | Cl |
| amino acid | amino acid | SH | OH | Br |
| amino acid | amino acid | SH | OH | I |
| amino acid | H | SH | OH | H |
| amino acid | H | SH | OH | $NH_2$ |
| amino acid | H | SH | OH | NH-cyclopropyl |
| amino acid | H | SH | OH | NH-methyl |
| amino acid | H | SH | OH | NH-ethyl |
| amino acid | H | SH | OH | NH-acetyl |
| amino acid | H | SH | OH | OH |
| amino acid | H | SH | OH | OMe |
| amino acid | H | SH | OH | OEt |
| amino acid | H | SH | OH | O-cyclopropyl |
| amino acid | H | SH | OH | O-acetyl |
| amino acid | H | SH | OH | SH |
| amino acid | H | SH | OH | SMe |
| amino acid | H | SH | OH | SEt |
| amino acid | H | SH | OH | S-cyclopropyl |
| amino acid | H | SH | OH | F |
| amino acid | H | SH | OH | Cl |
| amino acid | H | SH | OH | Br |
| amino acid | H | SH | OH | I |
| amino acid | acyl | SH | OH | H |
| amino acid | acyl | SH | OH | $NH_2$ |
| amino acid | acyl | SH | OH | NH-cyclopropyl |
| amino acid | acyl | SH | OH | NH-methyl |
| amino acid | acyl | SH | OH | NH-ethyl |
| amino acid | acyl | SH | OH | NH-acetyl |
| amino acid | acyl | SH | OH | OH |
| amino acid | acyl | SH | OH | OMe |
| amino acid | acyl | SH | OH | OEt |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | SH | OH | O-cyclopropyl |
| amino acid | acyl | SH | OH | O-acetyl |
| amino acid | acyl | SH | OH | SH |
| amino acid | acyl | SH | OH | SMe |
| amino acid | acyl | SH | OH | SEt |
| amino acid | acyl | SH | OH | S-cyclopropyl |
| amino acid | acyl | SH | OH | F |
| amino acid | acyl | SH | OH | Cl |
| amino acid | acyl | SH | OH | Br |
| amino acid | acyl | SH | OH | I |
| acyl | H | OH | OH | H |
| acyl | H | OH | OH | $NH_2$ |
| acyl | H | OH | OH | NH-cyclopropyl |
| acyl | H | OH | OH | NH-methyl |
| acyl | H | OH | OH | NH-ethyl |
| acyl | H | OH | OH | NH-acetyl |
| acyl | H | OH | OH | OH |
| acyl | H | OH | OH | OMe |
| acyl | H | OH | OH | OEt |
| acyl | H | OH | OH | O-cyclopropyl |
| acyl | H | OH | OH | O-acetyl |
| acyl | H | OH | OH | SH |
| acyl | H | OH | OH | SMe |
| acyl | H | OH | OH | SEt |
| acyl | H | OH | OH | S-cyclopropyl |
| acyl | H | OH | OH | F |
| acyl | H | OH | OH | Cl |
| acyl | H | OH | OH | Br |
| acyl | H | OH | OH | I |
| acyl | acyl | OH | OH | H |
| acyl | acyl | OH | OH | $NH_2$ |
| acyl | acyl | OH | OH | NH-cyclopropyl |
| acyl | acyl | OH | OH | NH-methyl |
| acyl | acyl | OH | OH | NH-ethyl |
| acyl | acyl | OH | OH | NH-acetyl |
| acyl | acyl | OH | OH | OH |
| acyl | acyl | OH | OH | OMe |
| acyl | acyl | OH | OH | OEt |
| acyl | acyl | OH | OH | O-cyclopropyl |
| acyl | acyl | OH | OH | O-acetyl |
| acyl | acyl | OH | OH | SH |
| acyl | acyl | OH | OH | SMe |
| acyl | acyl | OH | OH | SEt |
| acyl | acyl | OH | OH | S-cyclopropyl |
| acyl | acyl | OH | OH | F |
| acyl | acyl | OH | OH | Cl |
| acyl | acyl | OH | OH | Br |
| acyl | acyl | OH | OH | I |
| acyl | amino acid | OH | OH | H |
| acyl | amino acid | OH | OH | $NH_2$ |
| acyl | amino acid | OH | OH | NH-cyclopropyl |
| acyl | amino acid | OH | OH | NH-methyl |
| acyl | amino acid | OH | OH | NH-ethyl |
| acyl | amino acid | OH | OH | NH-acetyl |
| acyl | amino acid | OH | OH | OH |
| acyl | amino acid | OH | OH | OMe |
| acyl | amino acid | OH | OH | OEt |
| acyl | amino acid | OH | OH | O-cyclopropyl |
| acyl | amino acid | OH | OH | O-acetyl |
| acyl | amino acid | OH | OH | SH |
| acyl | amino acid | OH | OH | SMe |
| acyl | amino acid | OH | OH | SEt |
| acyl | amino acid | OH | OH | S-cyclopropyl |
| acyl | amino acid | OH | OH | F |
| acyl | amino acid | OH | OH | Cl |
| acyl | amino acid | OH | OH | Br |
| acyl | amino acid | OH | OH | I |
| H | acyl | OH | OH | H |
| H | acyl | OH | OH | $NH_2$ |
| H | acyl | OH | OH | NH-cyclopropyl |
| H | acyl | OH | OH | NH-methyl |
| H | acyl | OH | OH | NH-ethyl |
| H | acyl | OH | OH | NH-acetyl |
| H | acyl | OH | OH | OH |
| H | acyl | OH | OH | OMe |
| H | acyl | OH | OH | OEt |
| H | acyl | OH | OH | O-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | OH | OH | O-acetyl |
| H | acyl | OH | OH | SH |
| H | acyl | OH | OH | SMe |
| H | acyl | OH | OH | SEt |
| H | acyl | OH | OH | S-cyclopropyl |
| H | acyl | OH | OH | F |
| H | acyl | OH | OH | Cl |
| H | acyl | OH | OH | Br |
| H | acyl | OH | OH | I |
| H | amino acid | OH | OH | H |
| H | amino acid | OH | OH | $NH_2$ |
| H | amino acid | OH | OH | NH-cyclopropyl |
| H | amino acid | OH | OH | NH-methyl |
| H | amino acid | OH | OH | NH-ethyl |
| H | amino acid | OH | OH | NH-acetyl |
| H | amino acid | OH | OH | OH |
| H | amino acid | OH | OH | OMe |
| H | amino acid | OH | OH | OEt |
| H | amino acid | OH | OH | O-cyclopropyl |
| H | amino acid | OH | OH | O-acetyl |
| H | amino acid | OH | OH | SH |
| H | amino acid | OH | OH | SMe |
| H | amino acid | OH | OH | SEt |
| H | amino acid | OH | OH | S-cyclopropyl |
| H | amino acid | OH | OH | F |
| H | amino acid | OH | OH | Cl |
| H | amino acid | OH | OH | Br |
| H | amino acid | OH | OH | I |
| amino acid | amino acid | OH | OH | H |
| amino acid | amino acid | OH | OH | $NH_2$ |
| amino acid | amino acid | OH | OH | NH-cyclopropyl |
| amino acid | amino acid | OH | OH | NH-methyl |
| amino acid | amino acid | OH | OH | NH-ethyl |
| amino acid | amino acid | OH | OH | NH-acetyl |
| amino acid | amino acid | OH | OH | OH |
| amino acid | amino acid | OH | OH | OMe |
| amino acid | amino acid | OH | OH | OEt |
| amino acid | amino acid | OH | OH | O-cyclopropyl |
| amino acid | amino acid | OH | OH | O-acetyl |
| amino acid | amino acid | OH | OH | SH |
| amino acid | amino acid | OH | OH | SMe |
| amino acid | amino acid | OH | OH | SEt |
| amino acid | amino acid | OH | OH | S-cyclopropyl |
| amino acid | amino acid | OH | OH | F |
| amino acid | amino acid | OH | OH | Cl |
| amino acid | amino acid | OH | OH | Br |
| amino acid | amino acid | OH | OH | I |
| amino acid | H | OH | OH | H |
| amino acid | H | OH | OH | $NH_2$ |
| amino acid | H | OH | OH | NH-cyclopropyl |
| amino acid | H | OH | OH | NH-methyl |
| amino acid | H | OH | OH | NH-ethyl |
| amino acid | H | OH | OH | NH-acetyl |
| amino acid | H | OH | OH | OH |
| amino acid | H | OH | OH | OMe |
| amino acid | H | OH | OH | OEt |
| amino acid | H | OH | OH | O-cyclopropyl |
| amino acid | H | OH | OH | O-acetyl |
| amino acid | H | OH | OH | SH |
| amino acid | H | OH | OH | SMe |
| amino acid | H | OH | OH | SEt |
| amino acid | H | OH | OH | S-cyclopropyl |
| amino acid | H | OH | OH | F |
| amino acid | H | OH | OH | Cl |
| amino acid | H | OH | OH | Br |
| amino acid | H | OH | OH | I |
| amino acid | acyl | OH | OH | H |
| amino acid | acyl | OH | OH | $NH_2$ |
| amino acid | acyl | OH | OH | NH-cyclopropyl |
| amino acid | acyl | OH | OH | NH-methyl |
| amino acid | acyl | OH | OH | NH-ethyl |
| amino acid | acyl | OH | OH | NH-acetyl |
| amino acid | acyl | OH | OH | OH |
| amino acid | acyl | OH | OH | OMe |
| amino acid | acyl | OH | OH | OEt |
| amino acid | acyl | OH | OH | O-cyclopropyl |
| amino acid | acyl | OH | OH | O-acetyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | OH | OH | SH |
| amino acid | acyl | OH | OH | SMe |
| amino acid | acyl | OH | OH | SEt |
| amino acid | acyl | OH | OH | S-cyclopropyl |
| amino acid | acyl | OH | OH | F |
| amino acid | acyl | OH | OH | Cl |
| amino acid | acyl | OH | OH | Br |
| amino acid | acyl | OH | OH | I |
| acyl | H | $CH_3$ | H | H |
| acyl | H | $CH_3$ | H | $NH_2$ |
| acyl | H | $CH_3$ | H | NH-cyclopropyl |
| acyl | H | $CH_3$ | H | NH-methyl |
| acyl | H | $CH_3$ | H | NH-ethyl |
| acyl | H | $CH_3$ | H | NH-acetyl |
| acyl | H | $CH_3$ | H | OH |
| acyl | H | $CH_3$ | H | OMe |
| acyl | H | $CH_3$ | H | OEt |
| acyl | H | $CH_3$ | H | O-cyclopropyl |
| acyl | H | $CH_3$ | H | O-acetyl |
| acyl | H | $CH_3$ | H | SH |
| acyl | H | $CH_3$ | H | SMe |
| acyl | H | $CH_3$ | H | SEt |
| acyl | H | $CH_3$ | H | S-cyclopropyl |
| acyl | H | $CH_3$ | H | F |
| acyl | H | $CH_3$ | H | Cl |
| acyl | H | $CH_3$ | H | Br |
| acyl | H | $CH_3$ | H | I |
| acyl | acyl | $CH_3$ | H | H |
| acyl | acyl | $CH_3$ | H | $NH_2$ |
| acyl | acyl | $CH_3$ | H | NH-cyclopropyl |
| acyl | acyl | $CH_3$ | H | NH-methyl |
| acyl | acyl | $CH_3$ | H | NH-ethyl |
| acyl | acyl | $CH_3$ | H | NH-acetyl |
| acyl | acyl | $CH_3$ | H | OH |
| acyl | acyl | $CH_3$ | H | OMe |
| acyl | acyl | $CH_3$ | H | OEt |
| acyl | acyl | $CH_3$ | H | O-cyclopropyl |
| acyl | acyl | $CH_3$ | H | O-acetyl |
| acyl | acyl | $CH_3$ | H | SH |
| acyl | acyl | $CH_3$ | H | SMe |
| acyl | acyl | $CH_3$ | H | SEt |
| acyl | acyl | $CH_3$ | H | S-cyclopropyl |
| acyl | acyl | $CH_3$ | H | F |
| acyl | acyl | $CH_3$ | H | Cl |
| acyl | acyl | $CH_3$ | H | Br |
| acyl | acyl | $CH_3$ | H | I |
| acyl | amino acid | $CH_3$ | H | H |
| acyl | amino acid | $CH_3$ | H | $NH_2$ |
| acyl | amino acid | $CH_3$ | H | NH-cyclopropyl |
| acyl | amino acid | $CH_3$ | H | NH-methyl |
| acyl | amino acid | $CH_3$ | H | NH-ethyl |
| acyl | amino acid | $CH_3$ | H | NH-acetyl |
| acyl | amino acid | $CH_3$ | H | OH |
| acyl | amino acid | $CH_3$ | H | OMe |
| acyl | amino acid | $CH_3$ | H | OEt |
| acyl | amino acid | $CH_3$ | H | O-cyclopropyl |
| acyl | amino acid | $CH_3$ | H | O-acetyl |
| acyl | amino acid | $CH_3$ | H | SH |
| acyl | amino acid | $CH_3$ | H | SMe |
| acyl | amino acid | $CH_3$ | H | SEt |
| acyl | amino acid | $CH_3$ | H | S-cyclopropyl |
| acyl | amino acid | $CH_3$ | H | F |
| acyl | amino acid | $CH_3$ | H | Cl |
| acyl | amino acid | $CH_3$ | H | Br |
| acyl | amino acid | $CH_3$ | H | I |
| H | acyl | $CH_3$ | H | H |
| H | acyl | $CH_3$ | H | $NH_2$ |
| H | acyl | $CH_3$ | H | NH-cyclopropyl |
| H | acyl | $CH_3$ | H | NH-methyl |
| H | acyl | $CH_3$ | H | NH-ethyl |
| H | acyl | $CH_3$ | H | NH-acetyl |
| H | acyl | $CH_3$ | H | OH |
| H | acyl | $CH_3$ | H | OMe |
| H | acyl | $CH_3$ | H | OEt |
| H | acyl | $CH_3$ | H | O-cyclopropyl |
| H | acyl | $CH_3$ | H | O-acetyl |
| H | acyl | $CH_3$ | H | SH |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | $CH_3$ | H | SMe |
| H | acyl | $CH_3$ | H | SEt |
| H | acyl | $CH_3$ | H | S-cyclopropyl |
| H | acyl | $CH_3$ | H | F |
| H | acyl | $CH_3$ | H | Cl |
| H | acyl | $CH_3$ | H | Br |
| H | acyl | $CH_3$ | H | I |
| H | amino acid | $CH_3$ | H | H |
| H | amino acid | $CH_3$ | H | $NH_2$ |
| H | amino acid | $CH_3$ | H | NH-cyclopropyl |
| H | amino acid | $CH_3$ | H | NH-methyl |
| H | amino acid | $CH_3$ | H | NH-ethyl |
| H | amino acid | $CH_3$ | H | NH-acetyl |
| H | amino acid | $CH_3$ | H | OH |
| H | amino acid | $CH_3$ | H | OMe |
| H | amino acid | $CH_3$ | H | OEt |
| H | amino acid | $CH_3$ | H | O-cyclopropyl |
| H | amino acid | $CH_3$ | H | O-acetyl |
| H | amino acid | $CH_3$ | H | SH |
| H | amino acid | $CH_3$ | H | SMe |
| H | amino acid | $CH_3$ | H | SEt |
| H | amino acid | $CH_3$ | H | S-cyclopropyl |
| H | amino acid | $CH_3$ | H | F |
| H | amino acid | $CH_3$ | H | Cl |
| H | amino acid | $CH_3$ | H | Br |
| H | amino acid | $CH_3$ | H | I |
| amino acid | amino acid | $CH_3$ | H | H |
| amino acid | amino acid | $CH_3$ | H | $NH_2$ |
| amino acid | amino acid | $CH_3$ | H | NH-cyclopropyl |
| amino acid | amino acid | $CH_3$ | H | NH-methyl |
| amino acid | amino acid | $CH_3$ | H | NH-ethyl |
| amino acid | amino acid | $CH_3$ | H | NH-acetyl |
| amino acid | amino acid | $CH_3$ | H | OH |
| amino acid | amino acid | $CH_3$ | H | OMe |
| amino acid | amino acid | $CH_3$ | H | OEt |
| amino acid | amino acid | $CH_3$ | H | O-cyclopropyl |
| amino acid | amino acid | $CH_3$ | H | O-acetyl |
| amino acid | amino acid | $CH_3$ | H | SH |
| amino acid | amino acid | $CH_3$ | H | SMe |
| amino acid | amino acid | $CH_3$ | H | SEt |
| amino acid | amino acid | $CH_3$ | H | S-cyclopropyl |
| amino acid | amino acid | $CH_3$ | H | F |
| amino acid | amino acid | $CH_3$ | H | Cl |
| amino acid | amino acid | $CH_3$ | H | Br |
| amino acid | amino acid | $CH_3$ | H | I |
| amino acid | H | $CH_3$ | H | H |
| amino acid | H | $CH_3$ | H | $NH_2$ |
| amino acid | H | $CH_3$ | H | NH-cyclopropyl |
| amino acid | H | $CH_3$ | H | NH-methyl |
| amino acid | H | $CH_3$ | H | NH-ethyl |
| amino acid | H | $CH_3$ | H | NH-acetyl |
| amino acid | H | $CH_3$ | H | OH |
| amino acid | H | $CH_3$ | H | OMe |
| amino acid | H | $CH_3$ | H | OEt |
| amino acid | H | $CH_3$ | H | O-cyclopropyl |
| amino acid | H | $CH_3$ | H | O-acetyl |
| amino acid | H | $CH_3$ | H | SH |
| amino acid | H | $CH_3$ | H | SMe |
| amino acid | H | $CH_3$ | H | SEt |
| amino acid | H | $CH_3$ | H | S-cyclopropyl |
| amino acid | H | $CH_3$ | H | F |
| amino acid | H | $CH_3$ | H | Cl |
| amino acid | H | $CH_3$ | H | Br |
| amino acid | H | $CH_3$ | H | I |
| amino acid | acyl | $CH_3$ | H | H |
| amino acid | acyl | $CH_3$ | H | $NH_2$ |
| amino acid | acyl | $CH_3$ | H | NH-cyclopropyl |
| amino acid | acyl | $CH_3$ | H | NH-methyl |
| amino acid | acyl | $CH_3$ | H | NH-ethyl |
| amino acid | acyl | $CH_3$ | H | NH-acetyl |
| amino acid | acyl | $CH_3$ | H | OH |
| amino acid | acyl | $CH_3$ | H | OMe |
| amino acid | acyl | $CH_3$ | H | OEt |
| amino acid | acyl | $CH_3$ | H | O-cyclopropyl |
| amino acid | acyl | $CH_3$ | H | O-acetyl |
| amino acid | acyl | $CH_3$ | H | SH |
| amino acid | acyl | $CH_3$ | H | SMe |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | $CH_3$ | H | SEt |
| amino acid | acyl | $CH_3$ | H | S-cyclopropyl |
| amino acid | acyl | $CH_3$ | H | F |
| amino acid | acyl | $CH_3$ | H | Cl |
| amino acid | acyl | $CH_3$ | H | Br |
| amino acid | acyl | $CH_3$ | H | I |
| acyl | H | $CF_3$ | H | H |
| acyl | H | $CF_3$ | H | $NH_2$ |
| acyl | H | $CF_3$ | H | NH-cyclopropyl |
| acyl | H | $CF_3$ | H | NH-methyl |
| acyl | H | $CF_3$ | H | NH-ethyl |
| acyl | H | $CF_3$ | H | NH-acetyl |
| acyl | H | $CF_3$ | H | OH |
| acyl | H | $CF_3$ | H | OMe |
| acyl | H | $CF_3$ | H | OEt |
| acyl | H | $CF_3$ | H | O-cyclopropyl |
| acyl | H | $CF_3$ | H | O-acetyl |
| acyl | H | $CF_3$ | H | SH |
| acyl | H | $CF_3$ | H | SMe |
| acyl | H | $CF_3$ | H | SEt |
| acyl | H | $CF_3$ | H | S-cyclopropyl |
| acyl | H | $CF_3$ | H | F |
| acyl | H | $CF_3$ | H | Cl |
| acyl | H | $CF_3$ | H | Br |
| acyl | H | $CF_3$ | H | I |
| acyl | acyl | $CF_3$ | H | H |
| acyl | acyl | $CF_3$ | H | $NH_2$ |
| acyl | acyl | $CF_3$ | H | NH-cyclopropyl |
| acyl | acyl | $CF_3$ | H | NH-methyl |
| acyl | acyl | $CF_3$ | H | NH-ethyl |
| acyl | acyl | $CF_3$ | H | NH-acetyl |
| acyl | acyl | $CF_3$ | H | OH |
| acyl | acyl | $CF_3$ | H | OMe |
| acyl | acyl | $CF_3$ | H | OEt |
| acyl | acyl | $CF_3$ | H | O-cyclopropyl |
| acyl | acyl | $CF_3$ | H | O-acetyl |
| acyl | acyl | $CF_3$ | H | SH |
| acyl | acyl | $CF_3$ | H | SMe |
| acyl | acyl | $CF_3$ | H | SEt |
| acyl | acyl | $CF_3$ | H | S-cyclopropyl |
| acyl | acyl | $CF_3$ | H | F |
| acyl | acyl | $CF_3$ | H | Cl |
| acyl | acyl | $CF_3$ | H | Br |
| acyl | acyl | $CF_3$ | H | I |
| acyl | amino acid | $CF_3$ | H | H |
| acyl | amino acid | $CF_3$ | H | $NH_2$ |
| acyl | amino acid | $CF_3$ | H | NH-cyclopropyl |
| acyl | amino acid | $CF_3$ | H | NH-methyl |
| acyl | amino acid | $CF_3$ | H | NH-ethyl |
| acyl | amino acid | $CF_3$ | H | NH-acetyl |
| acyl | amino acid | $CF_3$ | H | OH |
| acyl | amino acid | $CF_3$ | H | OMe |
| acyl | amino acid | $CF_3$ | H | OEt |
| acyl | amino acid | $CF_3$ | H | O-cyclopropyl |
| acyl | amino acid | $CF_3$ | H | O-acetyl |
| acyl | amino acid | $CF_3$ | H | SH |
| acyl | amino acid | $CF_3$ | H | SMe |
| acyl | amino acid | $CF_3$ | H | SEt |
| acyl | amino acid | $CF_3$ | H | S-cyclopropyl |
| acyl | amino acid | $CF_3$ | H | F |
| acyl | amino acid | $CF_3$ | H | Cl |
| acyl | amino acid | $CF_3$ | H | Br |
| acyl | amino acid | $CF_3$ | H | I |
| H | acyl | $CF_3$ | H | H |
| H | acyl | $CF_3$ | H | $NH_2$ |
| H | acyl | $CF_3$ | H | NH-cyclopropyl |
| H | acyl | $CF_3$ | H | NH-methyl |
| H | acyl | $CF_3$ | H | NH-ethyl |
| H | acyl | $CF_3$ | H | NH-acetyl |
| H | acyl | $CF_3$ | H | OH |
| H | acyl | $CF_3$ | H | OMe |
| H | acyl | $CF_3$ | H | OEt |
| H | acyl | $CF_3$ | H | O-cyclopropyl |
| H | acyl | $CF_3$ | H | O-acetyl |
| H | acyl | $CF_3$ | H | SH |
| H | acyl | $CF_3$ | H | SMe |
| H | acyl | $CF_3$ | H | SEt |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | $CF_3$ | H | S-cyclopropyl |
| H | acyl | $CF_3$ | H | F |
| H | acyl | $CF_3$ | H | Cl |
| H | acyl | $CF_3$ | H | Br |
| H | acyl | $CF_3$ | H | I |
| H | amino acid | $CF_3$ | H | H |
| H | amino acid | $CF_3$ | H | $NH_2$ |
| H | amino acid | $CF_3$ | H | NH-cyclopropyl |
| H | amino acid | $CF_3$ | H | NH-methyl |
| H | amino acid | $CF_3$ | H | NH-ethyl |
| H | amino acid | $CF_3$ | H | NH-acetyl |
| H | amino acid | $CF_3$ | H | OH |
| H | amino acid | $CF_3$ | H | OMe |
| H | amino acid | $CF_3$ | H | OEt |
| H | amino acid | $CF_3$ | H | O-cyclopropyl |
| H | amino acid | $CF_3$ | H | O-acetyl |
| H | amino acid | $CF_3$ | H | SH |
| H | amino acid | $CF_3$ | H | SMe |
| H | amino acid | $CF_3$ | H | SEt |
| H | amino acid | $CF_3$ | H | S-cyclopropyl |
| H | amino acid | $CF_3$ | H | F |
| H | amino acid | $CF_3$ | H | Cl |
| H | amino acid | $CF_3$ | H | Br |
| H | amino acid | $CF_3$ | H | I |
| amino acid | amino acid | $CF_3$ | H | H |
| amino acid | amino acid | $CF_3$ | H | $NH_2$ |
| amino acid | amino acid | $CF_3$ | H | NH-cyclopropyl |
| amino acid | amino acid | $CF_3$ | H | NH-methyl |
| amino acid | amino acid | $CF_3$ | H | NH-ethyl |
| amino acid | amino acid | $CF_3$ | H | NH-acetyl |
| amino acid | amino acid | $CF_3$ | H | OH |
| amino acid | amino acid | $CF_3$ | H | OMe |
| amino acid | amino acid | $CF_3$ | H | OEt |
| amino acid | amino acid | $CF_3$ | H | O-cyclopropyl |
| amino acid | amino acid | $CF_3$ | H | O-acetyl |
| amino acid | amino acid | $CF_3$ | H | SH |
| amino acid | amino acid | $CF_3$ | H | SMe |
| amino acid | amino acid | $CF_3$ | H | SEt |
| amino acid | amino acid | $CF_3$ | H | S-cyclopropyl |
| amino acid | amino acid | $CF_3$ | H | F |
| amino acid | amino acid | $CF_3$ | H | Cl |
| amino acid | amino acid | $CF_3$ | H | Br |
| amino acid | amino acid | $CF_3$ | H | I |
| amino acid | H | $CF_3$ | H | H |
| amino acid | H | $CF_3$ | H | $NH_2$ |
| amino acid | H | $CF_3$ | H | NH-cyclopropyl |
| amino acid | H | $CF_3$ | H | NH-methyl |
| amino acid | H | $CF_3$ | H | NH-ethyl |
| amino acid | H | $CF_3$ | H | NH-acetyl |
| amino acid | H | $CF_3$ | H | OH |
| amino acid | H | $CF_3$ | H | OMe |
| amino acid | H | $CF_3$ | H | OEt |
| amino acid | H | $CF_3$ | H | O-cyclopropyl |
| amino acid | H | $CF_3$ | H | O-acetyl |
| amino acid | H | $CF_3$ | H | SH |
| amino acid | H | $CF_3$ | H | SMe |
| amino acid | H | $CF_3$ | H | SEt |
| amino acid | H | $CF_3$ | H | S-cyclopropyl |
| amino acid | H | $CF_3$ | H | F |
| amino acid | H | $CF_3$ | H | Cl |
| amino acid | H | $CF_3$ | H | Br |
| amino acid | H | $CF_3$ | H | I |
| amino acid | acyl | $CF_3$ | H | H |
| amino acid | acyl | $CF_3$ | H | $NH_2$ |
| amino acid | acyl | $CF_3$ | H | NH-cyclopropyl |
| amino acid | acyl | $CF_3$ | H | NH-methyl |
| amino acid | acyl | $CF_3$ | H | NH-ethyl |
| amino acid | acyl | $CF_3$ | H | NH-acetyl |
| amino acid | acyl | $CF_3$ | H | OH |
| amino acid | acyl | $CF_3$ | H | OMe |
| amino acid | acyl | $CF_3$ | H | OEt |
| amino acid | acyl | $CF_3$ | H | O-cyclopropyl |
| amino acid | acyl | $CF_3$ | H | O-acetyl |
| amino acid | acyl | $CF_3$ | H | SH |
| amino acid | acyl | $CF_3$ | H | SMe |
| amino acid | acyl | $CF_3$ | H | SEt |
| amino acid | acyl | $CF_3$ | H | S-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | $CF_3$ | H | F |
| amino acid | acyl | $CF_3$ | H | Cl |
| amino acid | acyl | $CF_3$ | H | Br |
| amino acid | acyl | $CF_3$ | H | I |
| acyl | H | Br | H | H |
| acyl | H | Br | H | $NH_2$ |
| acyl | H | Br | H | NH-cyclopropyl |
| acyl | H | Br | H | NH-methyl |
| acyl | H | Br | H | NH-ethyl |
| acyl | H | Br | H | NH-acetyl |
| acyl | H | Br | H | OH |
| acyl | H | Br | H | OMe |
| acyl | H | Br | H | OEt |
| acyl | H | Br | H | O-cyclopropyl |
| acyl | H | Br | H | O-acetyl |
| acyl | H | Br | H | SH |
| acyl | H | Br | H | SMe |
| acyl | H | Br | H | SEt |
| acyl | H | Br | H | S-cyclopropyl |
| acyl | H | Br | H | F |
| acyl | H | Br | H | Cl |
| acyl | H | Br | H | Br |
| acyl | H | Br | H | I |
| acyl | acyl | Br | H | H |
| acyl | acyl | Br | H | $NH_2$ |
| acyl | acyl | Br | H | NH-cyclopropyl |
| acyl | acyl | Br | H | NH-methyl |
| acyl | acyl | Br | H | NH-ethyl |
| acyl | acyl | Br | H | NH-acetyl |
| acyl | acyl | Br | H | OH |
| acyl | acyl | Br | H | OMe |
| acyl | acyl | Br | H | OEt |
| acyl | acyl | Br | H | O-cyclopropyl |
| acyl | acyl | Br | H | O-acetyl |
| acyl | acyl | Br | H | SH |
| acyl | acyl | Br | H | SMe |
| acyl | acyl | Br | H | SEt |
| acyl | acyl | Br | H | S-cyclopropyl |
| acyl | acyl | Br | H | F |
| acyl | acyl | Br | H | Cl |
| acyl | acyl | Br | H | Br |
| acyl | acyl | Br | H | I |
| acyl | amino acid | Br | H | H |
| acyl | amino acid | Br | H | $NH_2$ |
| acyl | amino acid | Br | H | NH-cyclopropyl |
| acyl | amino acid | Br | H | NH-methyl |
| acyl | amino acid | Br | H | NH-ethyl |
| acyl | amino acid | Br | H | NH-acetyl |
| acyl | amino acid | Br | H | OH |
| acyl | amino acid | Br | H | OMe |
| acyl | amino acid | Br | H | OEt |
| acyl | amino acid | Br | H | O-cyclopropyl |
| acyl | amino acid | Br | H | O-acetyl |
| acyl | amino acid | Br | H | SH |
| acyl | amino acid | Br | H | SMe |
| acyl | amino acid | Br | H | SEt |
| acyl | amino acid | Br | H | S-cyclopropyl |
| acyl | amino acid | Br | H | F |
| acyl | amino acid | Br | H | Cl |
| acyl | amino acid | Br | H | Br |
| acyl | amino acid | Br | H | I |
| H | acyl | Br | H | H |
| H | acyl | Br | H | $NH_2$ |
| H | acyl | Br | H | NH-cyclopropyl |
| H | acyl | Br | H | NH-methyl |
| H | acyl | Br | H | NH-ethyl |
| H | acyl | Br | H | NH-acetyl |
| H | acyl | Br | H | OH |
| H | acyl | Br | H | OMe |
| H | acyl | Br | H | OEt |
| H | acyl | Br | H | O-cyclopropyl |
| H | acyl | Br | H | O-acetyl |
| H | acyl | Br | H | SH |
| H | acyl | Br | H | SMe |
| H | acyl | Br | H | SEt |
| H | acyl | Br | H | S-cyclopropyl |
| H | acyl | Br | H | F |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | Br | H | Cl |
| H | acyl | Br | H | Br |
| H | acyl | Br | H | I |
| H | amino acid | Br | H | H |
| H | amino acid | Br | H | $NH_2$ |
| H | amino acid | Br | H | NH-cyclopropyl |
| H | amino acid | Br | H | NH-methyl |
| H | amino acid | Br | H | NH-ethyl |
| H | amino acid | Br | H | NH-acetyl |
| H | amino acid | Br | H | OH |
| H | amino acid | Br | H | OMe |
| H | amino acid | Br | H | OEt |
| H | amino acid | Br | H | O-cyclopropyl |
| H | amino acid | Br | H | O-acetyl |
| H | amino acid | Br | H | SH |
| H | amino acid | Br | H | SMe |
| H | amino acid | Br | H | SEt |
| H | amino acid | Br | H | S-cyclopropyl |
| H | amino acid | Br | H | F |
| H | amino acid | Br | H | Cl |
| H | amino acid | Br | H | Br |
| H | amino acid | Br | H | I |
| amino acid | amino acid | Br | H | H |
| amino acid | amino acid | Br | H | $NH_2$ |
| amino acid | amino acid | Br | H | NH-cyclopropyl |
| amino acid | amino acid | Br | H | NH-methyl |
| amino acid | amino acid | Br | H | NH-ethyl |
| amino acid | amino acid | Br | H | NH-acetyl |
| amino acid | amino acid | Br | H | OH |
| amino acid | amino acid | Br | H | OMe |
| amino acid | amino acid | Br | H | OEt |
| amino acid | amino acid | Br | H | O-cyclopropyl |
| amino acid | amino acid | Br | H | O-acetyl |
| amino acid | amino acid | Br | H | SH |
| amino acid | amino acid | Br | H | SMe |
| amino acid | amino acid | Br | H | SEt |
| amino acid | amino acid | Br | H | S-cyclopropyl |
| amino acid | amino acid | Br | H | F |
| amino acid | amino acid | Br | H | Cl |
| amino acid | amino acid | Br | H | Br |
| amino acid | amino acid | Br | H | I |
| amino acid | H | Br | H | H |
| amino acid | H | Br | H | $NH_2$ |
| amino acid | H | Br | H | NH-cyclopropyl |
| amino acid | H | Br | H | NH-methyl |
| amino acid | H | Br | H | NH-ethyl |
| amino acid | H | Br | H | NH-acetyl |
| amino acid | H | Br | H | OH |
| amino acid | H | Br | H | OMe |
| amino acid | H | Br | H | OEt |
| amino acid | H | Br | H | O-cyclopropyl |
| amino acid | H | Br | H | O-acetyl |
| amino acid | H | Br | H | SH |
| amino acid | H | Br | H | SMe |
| amino acid | H | Br | H | SEt |
| amino acid | H | Br | H | S-cyclopropyl |
| amino acid | H | Br | H | F |
| amino acid | H | Br | H | Cl |
| amino acid | H | Br | H | Br |
| amino acid | H | Br | H | I |
| amino acid | acyl | Br | H | H |
| amino acid | acyl | Br | H | $NH_2$ |
| amino acid | acyl | Br | H | NH-cyclopropyl |
| amino acid | acyl | Br | H | NH-methyl |
| amino acid | acyl | Br | H | NH-ethyl |
| amino acid | acyl | Br | H | NH-acetyl |
| amino acid | acyl | Br | H | OH |
| amino acid | acyl | Br | H | OMe |
| amino acid | acyl | Br | H | OEt |
| amino acid | acyl | Br | H | O-cyclopropyl |
| amino acid | acyl | Br | H | O-acetyl |
| amino acid | acyl | Br | H | SH |
| amino acid | acyl | Br | H | SMe |
| amino acid | acyl | Br | H | SEt |
| amino acid | acyl | Br | H | S-cyclopropyl |
| amino acid | acyl | Br | H | F |
| amino acid | acyl | Br | H | Cl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| amino acid | acyl | Br | H | Br |
| amino acid | acyl | Br | H | I |
| acyl | H | Cl | H | H |
| acyl | H | Cl | H | $NH_2$ |
| acyl | H | Cl | H | NH-cyclopropyl |
| acyl | H | Cl | H | NH-methyl |
| acyl | H | Cl | H | NH-ethyl |
| acyl | H | Cl | H | NH-acetyl |
| acyl | H | Cl | H | OH |
| acyl | H | Cl | H | OMe |
| acyl | H | Cl | H | OEt |
| acyl | H | Cl | H | O-cyclopropyl |
| acyl | H | Cl | H | O-acetyl |
| acyl | H | Cl | H | SH |
| acyl | H | Cl | H | SMe |
| acyl | H | Cl | H | SEt |
| acyl | H | Cl | H | S-cyclopropyl |
| acyl | H | Cl | H | F |
| acyl | H | Cl | H | Cl |
| acyl | H | Cl | H | Br |
| acyl | H | Cl | H | I |
| acyl | acyl | Cl | H | H |
| acyl | acyl | Cl | H | $NH_2$ |
| acyl | acyl | Cl | H | NH-cyclopropyl |
| acyl | acyl | Cl | H | NH-methyl |
| acyl | acyl | Cl | H | NH-ethyl |
| acyl | acyl | Cl | H | NH-acetyl |
| acyl | acyl | Cl | H | OH |
| acyl | acyl | Cl | H | OMe |
| acyl | acyl | Cl | H | OEt |
| acyl | acyl | Cl | H | O-cyclopropyl |
| acyl | acyl | Cl | H | O-acetyl |
| acyl | acyl | Cl | H | SH |
| acyl | acyl | Cl | H | SMe |
| acyl | acyl | Cl | H | SEt |
| acyl | acyl | Cl | H | S-cyclopropyl |
| acyl | acyl | Cl | H | F |
| acyl | acyl | Cl | H | Cl |
| acyl | acyl | Cl | H | Br |
| acyl | acyl | Cl | H | I |
| acyl | amino acid | Cl | H | H |
| acyl | amino acid | Cl | H | $NH_2$ |
| acyl | amino acid | Cl | H | NH-cyclopropyl |
| acyl | amino acid | Cl | H | NH-methyl |
| acyl | amino acid | Cl | H | NH-ethyl |
| acyl | amino acid | Cl | H | NH-acetyl |
| acyl | amino acid | Cl | H | OH |
| acyl | amino acid | Cl | H | OMe |
| acyl | amino acid | Cl | H | OEt |
| acyl | amino acid | Cl | H | O-cyclopropyl |
| acyl | amino acid | Cl | H | O-acetyl |
| acyl | amino acid | Cl | H | SH |
| acyl | amino acid | Cl | H | SMe |
| acyl | amino acid | Cl | H | SEt |
| acyl | amino acid | Cl | H | S-cyclopropyl |
| acyl | amino acid | Cl | H | F |
| acyl | amino acid | Cl | H | Cl |
| acyl | amino acid | Cl | H | Br |
| acyl | amino acid | Cl | H | I |
| H | acyl | Cl | H | H |
| H | acyl | Cl | H | $NH_2$ |
| H | acyl | Cl | H | NH-cyclopropyl |
| H | acyl | Cl | H | NH-methyl |
| H | acyl | Cl | H | NH-ethyl |
| H | acyl | Cl | H | NH-acetyl |
| H | acyl | Cl | H | OH |
| H | acyl | Cl | H | OMe |
| H | acyl | Cl | H | OEt |
| H | acyl | Cl | H | O-cyclopropyl |
| H | acyl | Cl | H | O-acetyl |
| H | acyl | Cl | H | SH |
| H | acyl | Cl | H | SMe |
| H | acyl | Cl | H | SEt |
| H | acyl | Cl | H | S-cyclopropyl |
| H | acyl | Cl | H | F |
| H | acyl | Cl | H | Cl |
| H | acyl | Cl | H | Br |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | acyl | Cl | H | I |
| H | amino acid | Cl | H | H |
| H | amino acid | Cl | H | $NH_2$ |
| H | amino acid | Cl | H | NH-cyclopropyl |
| H | amino acid | Cl | H | NH-methyl |
| H | amino acid | Cl | H | NH-ethyl |
| H | amino acid | Cl | H | NH-acetyl |
| H | amino acid | Cl | H | OH |
| H | amino acid | Cl | H | OMe |
| H | amino acid | Cl | H | OEt |
| H | amino acid | Cl | H | O-cyclopropyl |
| H | amino acid | Cl | H | O-acetyl |
| H | amino acid | Cl | H | SH |
| H | amino acid | Cl | H | SMe |
| H | amino acid | Cl | H | SEt |
| H | amino acid | Cl | H | S-cyclopropyl |
| H | amino acid | Cl | H | F |
| H | amino acid | Cl | H | Cl |
| H | amino acid | Cl | H | Br |
| H | amino acid | Cl | H | I |
| amino acid | amino acid | Cl | H | H |
| amino acid | amino acid | Cl | H | $NH_2$ |
| amino acid | amino acid | Cl | H | NH-cyclopropyl |
| amino acid | amino acid | Cl | H | NH-methyl |
| amino acid | amino acid | Cl | H | NH-ethyl |
| amino acid | amino acid | Cl | H | NH-acetyl |
| amino acid | amino acid | Cl | H | OH |
| amino acid | amino acid | Cl | H | OMe |
| amino acid | amino acid | Cl | H | OEt |
| amino acid | amino acid | Cl | H | O-cyclopropyl |
| amino acid | amino acid | Cl | H | O-acetyl |
| amino acid | amino acid | Cl | H | SH |
| amino acid | amino acid | Cl | H | SMe |
| amino acid | amino acid | Cl | H | SEt |
| amino acid | amino acid | Cl | H | S-cyclopropyl |
| amino acid | amino acid | Cl | H | F |
| amino acid | amino acid | Cl | H | Cl |
| amino acid | amino acid | Cl | H | Br |
| amino acid | amino acid | Cl | H | I |
| amino acid | H | Cl | H | H |
| amino acid | H | Cl | H | $NH_2$ |
| amino acid | H | Cl | H | NH-cyclopropyl |
| amino acid | H | Cl | H | NH-methyl |
| amino acid | H | Cl | H | NH-ethyl |
| amino acid | H | Cl | H | NH-acetyl |
| amino acid | H | Cl | H | OH |
| amino acid | H | Cl | H | OMe |
| amino acid | H | Cl | H | OEt |
| amino acid | H | Cl | H | O-cyclopropyl |
| amino acid | H | Cl | H | O-acetyl |
| amino acid | H | Cl | H | SH |
| amino acid | H | Cl | H | SMe |
| amino acid | H | Cl | H | SEt |
| amino acid | H | Cl | H | S-cyclopropyl |
| amino acid | H | Cl | H | F |
| amino acid | H | Cl | H | Cl |
| amino acid | H | Cl | H | Br |
| amino acid | H | Cl | H | I |
| amino acid | acyl | Cl | H | H |
| amino acid | acyl | Cl | H | $NH_2$ |
| amino acid | acyl | Cl | H | NH-cyclopropyl |
| amino acid | acyl | Cl | H | NH-methyl |
| amino acid | acyl | Cl | H | NH-ethyl |
| amino acid | acyl | Cl | H | NH-acetyl |
| amino acid | acyl | Cl | H | OH |
| amino acid | acyl | Cl | H | OMe |
| amino acid | acyl | Cl | H | OEt |
| amino acid | acyl | Cl | H | O-cyclopropyl |
| amino acid | acyl | Cl | H | O-acetyl |
| amino acid | acyl | Cl | H | SH |
| amino acid | acyl | Cl | H | SMe |
| amino acid | acyl | Cl | H | SEt |
| amino acid | acyl | Cl | H | S-cyclopropyl |
| amino acid | acyl | Cl | H | F |
| amino acid | acyl | Cl | H | Cl |
| amino acid | acyl | Cl | H | Br |
| amino acid | acyl | Cl | H | I |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | F | H | H |
| acyl | H | F | H | $NH_2$ |
| acyl | H | F | H | NH-cyclopropyl |
| acyl | H | F | H | NH-methyl |
| acyl | H | F | H | NH-ethyl |
| acyl | H | F | H | NH-acetyl |
| acyl | H | F | H | OH |
| acyl | H | F | H | OMe |
| acyl | H | F | H | OEt |
| acyl | H | F | H | O-cyclopropyl |
| acyl | H | F | H | O-acetyl |
| acyl | H | F | H | SH |
| acyl | H | F | H | SMe |
| acyl | H | F | H | SEt |
| acyl | H | F | H | S-cyclopropyl |
| acyl | H | F | H | F |
| acyl | H | F | H | Cl |
| acyl | H | F | H | Br |
| acyl | H | F | H | I |
| acyl | acyl | F | H | H |
| acyl | acyl | F | H | $NH_2$ |
| acyl | acyl | F | H | NH-cyclopropyl |
| acyl | acyl | F | H | NH-methyl |
| acyl | acyl | F | H | NH-ethyl |
| acyl | acyl | F | H | NH-acetyl |
| acyl | acyl | F | H | OH |
| acyl | acyl | F | H | OMe |
| acyl | acyl | F | H | OEt |
| acyl | acyl | F | H | O-cyclopropyl |
| acyl | acyl | F | H | O-acetyl |
| acyl | acyl | F | H | SH |
| acyl | acyl | F | H | SMe |
| acyl | acyl | F | H | SEt |
| acyl | acyl | F | H | S-cyclopropyl |
| acyl | acyl | F | H | F |
| acyl | acyl | F | H | Cl |
| acyl | acyl | F | H | Br |
| acyl | acyl | F | H | I |
| acyl | amino acid | F | H | H |
| acyl | amino acid | F | H | $NH_2$ |
| acyl | amino acid | F | H | NH-cyclopropyl |
| acyl | amino acid | F | H | NH-methyl |
| acyl | amino acid | F | H | NH-ethyl |
| acyl | amino acid | F | H | NH-acetyl |
| acyl | amino acid | F | H | OH |
| acyl | amino acid | F | H | OMe |
| acyl | amino acid | F | H | OEt |
| acyl | amino acid | F | H | O-cyclopropyl |
| acyl | amino acid | F | H | O-acetyl |
| acyl | amino acid | F | H | SH |
| acyl | amino acid | F | H | SMe |
| acyl | amino acid | F | H | SEt |
| acyl | amino acid | F | H | S-cyclopropyl |
| acyl | amino acid | F | H | F |
| acyl | amino acid | F | H | Cl |
| acyl | amino acid | F | H | Br |
| acyl | amino acid | F | H | I |
| H | acyl | F | H | H |
| H | acyl | F | H | $NH_2$ |
| H | acyl | F | H | NH-cyclopropyl |
| H | acyl | F | H | NH-methyl |
| H | acyl | F | H | NH-ethyl |
| H | acyl | F | H | NH-acetyl |
| H | acyl | F | H | OH |
| H | acyl | F | H | OMe |
| H | acyl | F | H | OEt |
| H | acyl | F | H | O-cyclopropyl |
| H | acyl | F | H | O-acetyl |
| H | acyl | F | H | SH |
| H | acyl | F | H | SMe |
| H | acyl | F | H | SEt |
| H | acyl | F | H | S-cyclopropyl |
| H | acyl | F | H | F |
| H | acyl | F | H | Cl |
| H | acyl | F | H | Br |
| H | acyl | F | H | I |
| H | amino acid | F | H | H |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | F | H | $NH_2$ |
| H | amino acid | F | H | NH-cyclopropyl |
| H | amino acid | F | H | NH-methyl |
| H | amino acid | F | H | NH-ethyl |
| H | amino acid | F | H | NH-acetyl |
| H | amino acid | F | H | OH |
| H | amino acid | F | H | OMe |
| H | amino acid | F | H | OEt |
| H | amino acid | F | H | O-cyclopropyl |
| H | amino acid | F | H | O-acetyl |
| H | amino acid | F | H | SH |
| H | amino acid | F | H | SMe |
| H | amino acid | F | H | SEt |
| H | amino acid | F | H | S-cyclopropyl |
| H | amino acid | F | H | F |
| H | amino acid | F | H | Cl |
| H | amino acid | F | H | Br |
| H | amino acid | F | H | I |
| amino acid | amino acid | F | H | H |
| amino acid | amino acid | F | H | $NH_2$ |
| amino acid | amino acid | F | H | NH-cyclopropyl |
| amino acid | amino acid | F | H | NH-methyl |
| amino acid | amino acid | F | H | NH-ethyl |
| amino acid | amino acid | F | H | NH-acetyl |
| amino acid | amino acid | F | H | OH |
| amino acid | amino acid | F | H | OMe |
| amino acid | amino acid | F | H | OEt |
| amino acid | amino acid | F | H | O-cyclopropyl |
| amino acid | amino acid | F | H | O-acetyl |
| amino acid | amino acid | F | H | SH |
| amino acid | amino acid | F | H | SMe |
| amino acid | amino acid | F | H | SEt |
| amino acid | amino acid | F | H | S-cyclopropyl |
| amino acid | amino acid | F | H | F |
| amino acid | amino acid | F | H | Cl |
| amino acid | amino acid | F | H | Br |
| amino acid | amino acid | F | H | I |
| amino acid | H | F | H | H |
| amino acid | H | F | H | $NH_2$ |
| amino acid | H | F | H | NH-cyclopropyl |
| amino acid | H | F | H | NH-methyl |
| amino acid | H | F | H | NH-ethyl |
| amino acid | H | F | H | NH-acetyl |
| amino acid | H | F | H | OH |
| amino acid | H | F | H | OMe |
| amino acid | H | F | H | OEt |
| amino acid | H | F | H | O-cyclopropyl |
| amino acid | H | F | H | O-acetyl |
| amino acid | H | F | H | SH |
| amino acid | H | F | H | SMe |
| amino acid | H | F | H | SEt |
| amino acid | H | F | H | S-cyclopropyl |
| amino acid | H | F | H | F |
| amino acid | H | F | H | Cl |
| amino acid | H | F | H | Br |
| amino acid | H | F | H | I |
| amino acid | acyl | F | H | H |
| amino acid | acyl | F | H | $NH_2$ |
| amino acid | acyl | F | H | NH-cyclopropyl |
| amino acid | acyl | F | H | NH-methyl |
| amino acid | acyl | F | H | NH-ethyl |
| amino acid | acyl | F | H | NH-acetyl |
| amino acid | acyl | F | H | OH |
| amino acid | acyl | F | H | OMe |
| amino acid | acyl | F | H | OEt |
| amino acid | acyl | F | H | O-cyclopropyl |
| amino acid | acyl | F | H | O-acetyl |
| amino acid | acyl | F | H | SH |
| amino acid | acyl | F | H | SMe |
| amino acid | acyl | F | H | SEt |
| amino acid | acyl | F | H | S-cyclopropyl |
| amino acid | acyl | F | H | F |
| amino acid | acyl | F | H | Cl |
| amino acid | acyl | F | H | Br |
| amino acid | acyl | F | H | I |
| acyl | H | $NH_2$ | H | H |
| acyl | H | $NH_2$ | H | $NH_2$ |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | $NH_2$ | H | NH-cyclopropyl |
| acyl | H | $NH_2$ | H | NH-methyl |
| acyl | H | $NH_2$ | H | NH-ethyl |
| acyl | H | $NH_2$ | H | NH-acetyl |
| acyl | H | $NH_2$ | H | OH |
| acyl | H | $NH_2$ | H | OMe |
| acyl | H | $NH_2$ | H | OEt |
| acyl | H | $NH_2$ | H | O-cyclopropyl |
| acyl | H | $NH_2$ | H | O-acetyl |
| acyl | H | $NH_2$ | H | SH |
| acyl | H | $NH_2$ | H | SMe |
| acyl | H | $NH_2$ | H | SEt |
| acyl | H | $NH_2$ | H | S-cyclopropyl |
| acyl | H | $NH_2$ | H | F |
| acyl | H | $NH_2$ | H | Cl |
| acyl | H | $NH_2$ | H | Br |
| acyl | H | $NH_2$ | H | I |
| acyl | acyl | $NH_2$ | H | H |
| acyl | acyl | $NH_2$ | H | $NH_2$ |
| acyl | acyl | $NH_2$ | H | NH-cyclopropyl |
| acyl | acyl | $NH_2$ | H | NH-methyl |
| acyl | acyl | $NH_2$ | H | NH-ethyl |
| acyl | acyl | $NH_2$ | H | NH-acetyl |
| acyl | acyl | $NH_2$ | H | OH |
| acyl | acyl | $NH_2$ | H | OMe |
| acyl | acyl | $NH_2$ | H | OEt |
| acyl | acyl | $NH_2$ | H | O-cyclopropyl |
| acyl | acyl | $NH_2$ | H | O-acetyl |
| acyl | acyl | $NH_2$ | H | SH |
| acyl | acyl | $NH_2$ | H | SMe |
| acyl | acyl | $NH_2$ | H | SEt |
| acyl | acyl | $NH_2$ | H | S-cyclopropyl |
| acyl | acyl | $NH_2$ | H | F |
| acyl | acyl | $NH_2$ | H | Cl |
| acyl | acyl | $NH_2$ | H | Br |
| acyl | acyl | $NH_2$ | H | I |
| acyl | amino acid | $NH_2$ | H | H |
| acyl | amino acid | $NH_2$ | H | $NH_2$ |
| acyl | amino acid | $NH_2$ | H | NH-cyclopropyl |
| acyl | amino acid | $NH_2$ | H | NH-methyl |
| acyl | amino acid | $NH_2$ | H | NH-ethyl |
| acyl | amino acid | $NH_2$ | H | NH-acetyl |
| acyl | amino acid | $NH_2$ | H | OH |
| acyl | amino acid | $NH_2$ | H | OMe |
| acyl | amino acid | $NH_2$ | H | OEt |
| acyl | amino acid | $NH_2$ | H | O-cyclopropyl |
| acyl | amino acid | $NH_2$ | H | O-acetyl |
| acyl | amino acid | $NH_2$ | H | SH |
| acyl | amino acid | $NH_2$ | H | SMe |
| acyl | amino acid | $NH_2$ | H | SEt |
| acyl | amino acid | $NH_2$ | H | S-cyclopropyl |
| acyl | amino acid | $NH_2$ | H | F |
| acyl | amino acid | $NH_2$ | H | Cl |
| acyl | amino acid | $NH_2$ | H | Br |
| acyl | amino acid | $NH_2$ | H | I |
| H | acyl | $NH_2$ | H | H |
| H | acyl | $NH_2$ | H | $NH_2$ |
| H | acyl | $NH_2$ | H | NH-cyclopropyl |
| H | acyl | $NH_2$ | H | NH-methyl |
| H | acyl | $NH_2$ | H | NH-ethyl |
| H | acyl | $NH_2$ | H | NH-acetyl |
| H | acyl | $NH_2$ | H | OH |
| H | acyl | $NH_2$ | H | OMe |
| H | acyl | $NH_2$ | H | OEt |
| H | acyl | $NH_2$ | H | O-cyclopropyl |
| H | acyl | $NH_2$ | H | O-acetyl |
| H | acyl | $NH_2$ | H | SH |
| H | acyl | $NH_2$ | H | SMe |
| H | acyl | $NH_2$ | H | SEt |
| H | acyl | $NH_2$ | H | S-cyclopropyl |
| H | acyl | $NH_2$ | H | F |
| H | acyl | $NH_2$ | H | Cl |
| H | acyl | $NH_2$ | H | Br |
| H | acyl | $NH_2$ | H | I |
| H | amino acid | $NH_2$ | H | H |
| H | amino acid | $NH_2$ | H | $NH_2$ |
| H | amino acid | $NH_2$ | H | NH-cyclopropyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | $NH_2$ | H | NH-methyl |
| H | amino acid | $NH_2$ | H | NH-ethyl |
| H | amino acid | $NH_2$ | H | NH-acetyl |
| H | amino acid | $NH_2$ | H | OH |
| H | amino acid | $NH_2$ | H | OMe |
| H | amino acid | $NH_2$ | H | OEt |
| H | amino acid | $NH_2$ | H | O-cyclopropyl |
| H | amino acid | $NH_2$ | H | O-acetyl |
| H | amino acid | $NH_2$ | H | SH |
| H | amino acid | $NH_2$ | H | SMe |
| H | amino acid | $NH_2$ | H | SEt |
| H | amino acid | $NH_2$ | H | S-cyclopropyl |
| H | amino acid | $NH_2$ | H | F |
| H | amino acid | $NH_2$ | H | Cl |
| H | amino acid | $NH_2$ | H | Br |
| H | amino acid | $NH_2$ | H | I |
| amino acid | amino acid | $NH_2$ | H | H |
| amino acid | amino acid | $NH_2$ | H | $NH_2$ |
| amino acid | amino acid | $NH_2$ | H | NH-cyclopropyl |
| amino acid | amino acid | $NH_2$ | H | NH-methyl |
| amino acid | amino acid | $NH_2$ | H | NH-ethyl |
| amino acid | amino acid | $NH_2$ | H | NH-acetyl |
| amino acid | amino acid | $NH_2$ | H | OH |
| amino acid | amino acid | $NH_2$ | H | OMe |
| amino acid | amino acid | $NH_2$ | H | OEt |
| amino acid | amino acid | $NH_2$ | H | O-cyclopropyl |
| amino acid | amino acid | $NH_2$ | H | O-acetyl |
| amino acid | amino acid | $NH_2$ | H | SH |
| amino acid | amino acid | $NH_2$ | H | SMe |
| amino acid | amino acid | $NH_2$ | H | SEt |
| amino acid | amino acid | $NH_2$ | H | S-cyclopropyl |
| amino acid | amino acid | $NH_2$ | H | F |
| amino acid | amino acid | $NH_2$ | H | Cl |
| amino acid | amino acid | $NH_2$ | H | Br |
| amino acid | amino acid | $NH_2$ | H | I |
| amino acid | H | $NH_2$ | H | H |
| amino acid | H | $NH_2$ | H | $NH_2$ |
| amino acid | H | $NH_2$ | H | NH-cyclopropyl |
| amino acid | H | $NH_2$ | H | NH-methyl |
| amino acid | H | $NH_2$ | H | NH-ethyl |
| amino acid | H | $NH_2$ | H | NH-acetyl |
| amino acid | H | $NH_2$ | H | OH |
| amino acid | H | $NH_2$ | H | OMe |
| amino acid | H | $NH_2$ | H | OEt |
| amino acid | H | $NH_2$ | H | O-cyclopropyl |
| amino acid | H | $NH_2$ | H | O-acetyl |
| amino acid | H | $NH_2$ | H | SH |
| amino acid | H | $NH_2$ | H | SMe |
| amino acid | H | $NH_2$ | H | SEt |
| amino acid | H | $NH_2$ | H | S-cyclopropyl |
| amino acid | H | $NH_2$ | H | F |
| amino acid | H | $NH_2$ | H | Cl |
| amino acid | H | $NH_2$ | H | Br |
| amino acid | H | $NH_2$ | H | I |
| amino acid | acyl | $NH_2$ | H | H |
| amino acid | acyl | $NH_2$ | H | $NH_2$ |
| amino acid | acyl | $NH_2$ | H | NH-cyclopropyl |
| amino acid | acyl | $NH_2$ | H | NH-methyl |
| amino acid | acyl | $NH_2$ | H | NH-ethyl |
| amino acid | acyl | $NH_2$ | H | NH-acetyl |
| amino acid | acyl | $NH_2$ | H | OH |
| amino acid | acyl | $NH_2$ | H | OMe |
| amino acid | acyl | $NH_2$ | H | OEt |
| amino acid | acyl | $NH_2$ | H | O-cyclopropyl |
| amino acid | acyl | $NH_2$ | H | O-acetyl |
| amino acid | acyl | $NH_2$ | H | SH |
| amino acid | acyl | $NH_2$ | H | SMe |
| amino acid | acyl | $NH_2$ | H | SEt |
| amino acid | acyl | $NH_2$ | H | S-cyclopropyl |
| amino acid | acyl | $NH_2$ | H | F |
| amino acid | acyl | $NH_2$ | H | Cl |
| amino acid | acyl | $NH_2$ | H | Br |
| amino acid | acyl | $NH_2$ | H | I |
| acyl | H | SH | H | H |
| acyl | H | SH | H | $NH_2$ |
| acyl | H | SH | H | NH-cyclopropyl |
| acyl | H | SH | H | NH-methyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | SH | H | NH-ethyl |
| acyl | H | SH | H | NH-acetyl |
| acyl | H | SH | H | OH |
| acyl | H | SH | H | OMe |
| acyl | H | SH | H | OEt |
| acyl | H | SH | H | O-cyclopropyl |
| acyl | H | SH | H | O-acetyl |
| acyl | H | SH | H | SH |
| acyl | H | SH | H | SMe |
| acyl | H | SH | H | SEt |
| acyl | H | SH | H | S-cyclopropyl |
| acyl | H | SH | H | F |
| acyl | H | SH | H | Cl |
| acyl | H | SH | H | Br |
| acyl | H | SH | H | I |
| acyl | acyl | SH | H | H |
| acyl | acyl | SH | H | $NH_2$ |
| acyl | acyl | SH | H | NH-cyclopropyl |
| acyl | acyl | SH | H | NH-methyl |
| acyl | acyl | SH | H | NH-ethyl |
| acyl | acyl | SH | H | NH-acetyl |
| acyl | acyl | SH | H | OH |
| acyl | acyl | SH | H | OMe |
| acyl | acyl | SH | H | OEt |
| acyl | acyl | SH | H | O-cyclopropyl |
| acyl | acyl | SH | H | O-acetyl |
| acyl | acyl | SH | H | SH |
| acyl | acyl | SH | H | SMe |
| acyl | acyl | SH | H | SEt |
| acyl | acyl | SH | H | S-cyclopropyl |
| acyl | acyl | SH | H | F |
| acyl | acyl | SH | H | Cl |
| acyl | acyl | SH | H | Br |
| acyl | acyl | SH | H | I |
| acyl | amino acid | SH | H | H |
| acyl | amino acid | SH | H | $NH_2$ |
| acyl | amino acid | SH | H | NH-cyclopropyl |
| acyl | amino acid | SH | H | NH-methyl |
| acyl | amino acid | SH | H | NH-ethyl |
| acyl | amino acid | SH | H | NH-acetyl |
| acyl | amino acid | SH | H | OH |
| acyl | amino acid | SH | H | OMe |
| acyl | amino acid | SH | H | OEt |
| acyl | amino acid | SH | H | O-cyclopropyl |
| acyl | amino acid | SH | H | O-acetyl |
| acyl | amino acid | SH | H | SH |
| acyl | amino acid | SH | H | SMe |
| acyl | amino acid | SH | H | SEt |
| acyl | amino acid | SH | H | S-cyclopropyl |
| acyl | amino acid | SH | H | F |
| acyl | amino acid | SH | H | Cl |
| acyl | amino acid | SH | H | Br |
| acyl | amino acid | SH | H | I |
| H | acyl | SH | H | H |
| H | acyl | SH | H | $NH_2$ |
| H | acyl | SH | H | NH-cyclopropyl |
| H | acyl | SH | H | NH-methyl |
| H | acyl | SH | H | NH-ethyl |
| H | acyl | SH | H | NH-acetyl |
| H | acyl | SH | H | OH |
| H | acyl | SH | H | OMe |
| H | acyl | SH | H | OEt |
| H | acyl | SH | H | O-cyclopropyl |
| H | acyl | SH | H | O-acetyl |
| H | acyl | SH | H | SH |
| H | acyl | SH | H | SMe |
| H | acyl | SH | H | SEt |
| H | acyl | SH | H | S-cyclopropyl |
| H | acyl | SH | H | F |
| H | acyl | SH | H | Cl |
| H | acyl | SH | H | Br |
| H | acyl | SH | H | I |
| H | amino acid | SH | H | H |
| H | amino acid | SH | H | $NH_2$ |
| H | amino acid | SH | H | NH-cyclopropyl |
| H | amino acid | SH | H | NH-methyl |
| H | amino acid | SH | H | NH-ethyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | SH | H | NH-acetyl |
| H | amino acid | SH | H | OH |
| H | amino acid | SH | H | OMe |
| H | amino acid | SH | H | OEt |
| H | amino acid | SH | H | O-cyclopropyl |
| H | amino acid | SH | H | O-acetyl |
| H | amino acid | SH | H | SH |
| H | amino acid | SH | H | SMe |
| H | amino acid | SH | H | SEt |
| H | amino acid | SH | H | S-cyclopropyl |
| H | amino acid | SH | H | F |
| H | amino acid | SH | H | Cl |
| H | amino acid | SH | H | Br |
| H | amino acid | SH | H | I |
| amino acid | amino acid | SH | H | H |
| amino acid | amino acid | SH | H | $NH_2$ |
| amino acid | amino acid | SH | H | NH-cyclopropyl |
| amino acid | amino acid | SH | H | NH-methyl |
| amino acid | amino acid | SH | H | NH-ethyl |
| amino acid | amino acid | SH | H | NH-acetyl |
| amino acid | amino acid | SH | H | OH |
| amino acid | amino acid | SH | H | OMe |
| amino acid | amino acid | SH | H | OEt |
| amino acid | amino acid | SH | H | O-cyclopropyl |
| amino acid | amino acid | SH | H | O-acetyl |
| amino acid | amino acid | SH | H | SH |
| amino acid | amino acid | SH | H | SMe |
| amino acid | amino acid | SH | H | SEt |
| amino acid | amino acid | SH | H | S-cyclopropyl |
| amino acid | amino acid | SH | H | F |
| amino acid | amino acid | SH | H | Cl |
| amino acid | amino acid | SH | H | Br |
| amino acid | amino acid | SH | H | I |
| amino acid | H | SH | H | H |
| amino acid | H | SH | H | $NH_2$ |
| amino acid | H | SH | H | NH-cyclopropyl |
| amino acid | H | SH | H | NH-methyl |
| amino acid | H | SH | H | NH-ethyl |
| amino acid | H | SH | H | NH-acetyl |
| amino acid | H | SH | H | OH |
| amino acid | H | SH | H | OMe |
| amino acid | H | SH | H | OEt |
| amino acid | H | SH | H | O-cyclopropyl |
| amino acid | H | SH | H | O-acetyl |
| amino acid | H | SH | H | SH |
| amino acid | H | SH | H | SMe |
| amino acid | H | SH | H | SEt |
| amino acid | H | SH | H | S-cyclopropyl |
| amino acid | H | SH | H | F |
| amino acid | H | SH | H | Cl |
| amino acid | H | SH | H | Br |
| amino acid | H | SH | H | I |
| amino acid | acyl | SH | H | H |
| amino acid | acyl | SH | H | $NH_2$ |
| amino acid | acyl | SH | H | NH-cyclopropyl |
| amino acid | acyl | SH | H | NH-methyl |
| amino acid | acyl | SH | H | NH-ethyl |
| amino acid | acyl | SH | H | NH-acetyl |
| amino acid | acyl | SH | H | OH |
| amino acid | acyl | SH | H | OMe |
| amino acid | acyl | SH | H | OEt |
| amino acid | acyl | SH | H | O-cyclopropyl |
| amino acid | acyl | SH | H | O-acetyl |
| amino acid | acyl | SH | H | SH |
| amino acid | acyl | SH | H | SMe |
| amino acid | acyl | SH | H | SEt |
| amino acid | acyl | SH | H | S-cyclopropyl |
| amino acid | acyl | SH | H | F |
| amino acid | acyl | SH | H | Cl |
| amino acid | acyl | SH | H | Br |
| amino acid | acyl | SH | H | I |
| acyl | H | OH | H | H |
| acyl | H | OH | H | $NH_2$ |
| acyl | H | OH | H | NH-cyclopropyl |
| acyl | H | OH | H | NH-methyl |
| acyl | H | OH | H | NH-ethyl |
| acyl | H | OH | H | NH-acetyl |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| acyl | H | OH | H | OH |
| acyl | H | OH | H | OMe |
| acyl | H | OH | H | OEt |
| acyl | H | OH | H | O-cyclopropyl |
| acyl | H | OH | H | O-acetyl |
| acyl | H | OH | H | SH |
| acyl | H | OH | H | SMe |
| acyl | H | OH | H | SEt |
| acyl | H | OH | H | S-cyclopropyl |
| acyl | H | OH | H | F |
| acyl | H | OH | H | Cl |
| acyl | H | OH | H | Br |
| acyl | H | OH | H | I |
| acyl | acyl | OH | H | H |
| acyl | acyl | OH | H | $NH_2$ |
| acyl | acyl | OH | H | NH-cyclopropyl |
| acyl | acyl | OH | H | NH-methyl |
| acyl | acyl | OH | H | NH-ethyl |
| acyl | acyl | OH | H | NH-acetyl |
| acyl | acyl | OH | H | OH |
| acyl | acyl | OH | H | OMe |
| acyl | acyl | OH | H | OEt |
| acyl | acyl | OH | H | O-cyclopropyl |
| acyl | acyl | OH | H | O-acetyl |
| acyl | acyl | OH | H | SH |
| acyl | acyl | OH | H | SMe |
| acyl | acyl | OH | H | SEt |
| acyl | acyl | OH | H | S-cyclopropyl |
| acyl | acyl | OH | H | F |
| acyl | acyl | OH | H | Cl |
| acyl | acyl | OH | H | Br |
| acyl | acyl | OH | H | I |
| acyl | amino acid | OH | H | H |
| acyl | amino acid | OH | H | $NH_2$ |
| acyl | amino acid | OH | H | NH-cyclopropyl |
| acyl | amino acid | OH | H | NH-methyl |
| acyl | amino acid | OH | H | NH-ethyl |
| acyl | amino acid | OH | H | NH-acetyl |
| acyl | amino acid | OH | H | OH |
| acyl | amino acid | OH | H | OMe |
| acyl | amino acid | OH | H | OEt |
| acyl | amino acid | OH | H | O-cyclopropyl |
| acyl | amino acid | OH | H | O-acetyl |
| acyl | amino acid | OH | H | SH |
| acyl | amino acid | OH | H | SMe |
| acyl | amino acid | OH | H | SEt |
| acyl | amino acid | OH | H | S-cyclopropyl |
| acyl | amino acid | OH | H | F |
| acyl | amino acid | OH | H | Cl |
| acyl | amino acid | OH | H | Br |
| acyl | amino acid | OH | H | I |
| H | acyl | OH | H | H |
| H | acyl | OH | H | $NH_2$ |
| H | acyl | OH | H | NH-cyclopropyl |
| H | acyl | OH | H | NH-methyl |
| H | acyl | OH | H | NH-ethyl |
| H | acyl | OH | H | NH-acetyl |
| H | acyl | OH | H | OH |
| H | acyl | OH | H | OMe |
| H | acyl | OH | H | OEt |
| H | acyl | OH | H | O-cyclopropyl |
| H | acyl | OH | H | O-acetyl |
| H | acyl | OH | H | SH |
| H | acyl | OH | H | SMe |
| H | acyl | OH | H | SEt |
| H | acyl | OH | H | S-cyclopropyl |
| H | acyl | OH | H | F |
| H | acyl | OH | H | Cl |
| H | acyl | OH | H | Br |
| H | acyl | OH | H | I |
| H | amino acid | OH | H | H |
| H | amino acid | OH | H | $NH_2$ |
| H | amino acid | OH | H | NH-cyclopropyl |
| H | amino acid | OH | H | NH-methyl |
| H | amino acid | OH | H | NH-ethyl |
| H | amino acid | OH | H | NH-acetyl |
| H | amino acid | OH | H | OH |

TABLE 20-continued

| $R^2$ | $R^3$ | $X^1$ | $X^2$ | Y |
|---|---|---|---|---|
| H | amino acid | OH | H | OMe |
| H | amino acid | OH | H | OEt |
| H | amino acid | OH | H | O-cyclopropyl |
| H | amino acid | OH | H | O-acetyl |
| H | amino acid | OH | H | SH |
| H | amino acid | OH | H | SMe |
| H | amino acid | OH | H | SEt |
| H | amino acid | OH | H | S-cyclopropyl |
| H | amino acid | OH | H | F |
| H | amino acid | OH | H | Cl |
| H | amino acid | OH | H | Br |
| H | amino acid | OH | H | I |
| amino acid | amino acid | OH | H | H |
| amino acid | amino acid | OH | H | $NH_2$ |
| amino acid | amino acid | OH | H | NH-cyclopropyl |
| amino acid | amino acid | OH | H | NH-methyl |
| amino acid | amino acid | OH | H | NH-ethyl |
| amino acid | amino acid | OH | H | NH-acetyl |
| amino acid | amino acid | OH | H | OH |
| amino acid | amino acid | OH | H | OMe |
| amino acid | amino acid | OH | H | OEt |
| amino acid | amino acid | OH | H | O-cyclopropyl |
| amino acid | amino acid | OH | H | O-acetyl |
| amino acid | amino acid | OH | H | SH |
| amino acid | amino acid | OH | H | SMe |
| amino acid | amino acid | OH | H | SEt |
| amino acid | amino acid | OH | H | S-cyclopropyl |
| amino acid | amino acid | OH | H | F |
| amino acid | amino acid | OH | H | Cl |
| amino acid | amino acid | OH | H | Br |
| amino acid | amino acid | OH | H | I |
| amino acid | H | OH | H | H |
| amino acid | H | OH | H | $NH_2$ |
| amino acid | H | OH | H | NH-cyclopropyl |
| amino acid | H | OH | H | NH-methyl |
| amino acid | H | OH | H | NH-ethyl |
| amino acid | H | OH | H | NH-acetyl |
| amino acid | H | OH | H | OH |
| amino acid | H | OH | H | OMe |
| amino acid | H | OH | H | OEt |
| amino acid | H | OH | H | O-cyclopropyl |
| amino acid | H | OH | H | O-acetyl |
| amino acid | H | OH | H | SH |
| amino acid | H | OH | H | SMe |
| amino acid | H | OH | H | SEt |
| amino acid | H | OH | H | S-cyclopropyl |
| amino acid | H | OH | H | F |
| amino acid | H | OH | H | Cl |
| amino acid | H | OH | H | Br |
| amino acid | H | OH | H | I |
| amino acid | acyl | OH | H | H |
| amino acid | acyl | OH | H | $NH_2$ |
| amino acid | acyl | OH | H | NH-cyclopropyl |
| amino acid | acyl | OH | H | NH-methyl |
| amino acid | acyl | OH | H | NH-ethyl |
| amino acid | acyl | OH | H | NH-acetyl |
| amino acid | acyl | OH | H | OH |
| amino acid | acyl | OH | H | OMe |
| amino acid | acyl | OH | H | OEt |
| amino acid | acyl | OH | H | O-cyclopropyl |
| amino acid | acyl | OH | H | O-acetyl |
| amino acid | acyl | OH | H | SH |
| amino acid | acyl | OH | H | SMe |
| amino acid | acyl | OH | H | SEt |
| amino acid | acyl | OH | H | S-cyclopropyl |
| amino acid | acyl | OH | H | F |
| amino acid | acyl | OH | H | Cl |
| amino acid | acyl | OH | H | Br |
| amino acid | acyl | OH | H | I |

TABLE 21

| $R^2$ | $R^3$ | $R^6$ | X | Base |
|---|---|---|---|---|
| acyl | H | $CH_3$ | O | 6-Methylthymine |
| acyl | H | $CH_3$ | O | 6-Methyluracil |
| acyl | H | $CH_3$ | O | 8-Methylguanine |
| acyl | H | $CH_3$ | O | 6-Methylcytosine |
| acyl | H | $CH_3$ | O | 8-Methyladenine |
| acyl | H | $CH_3$ | O | 8-Methylhypoxanthine |
| acyl | H | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| acyl | H | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| acyl | H | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| acyl | H | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| acyl | H | $CH_3$ | O | 2-amino-8-methyladenine |
| acyl | H | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| acyl | H | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| acyl | H | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| acyl | H | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| acyl | H | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | H | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | H | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | H | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| acyl | H | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | acyl | $CH_3$ | O | 6-Methylthymine |
| acyl | acyl | $CH_3$ | O | 6-Methyluracil |
| acyl | acyl | $CH_3$ | O | 8-Methylguanine |
| acyl | acyl | $CH_3$ | O | 6-Methylcytosine |
| acyl | acyl | $CH_3$ | O | 8-Methyladenine |
| acyl | acyl | $CH_3$ | O | 8-Methylhypoxanthine |
| acyl | acyl | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| acyl | acyl | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| acyl | acyl | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| acyl | acyl | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| acyl | acyl | $CH_3$ | O | 2-amino-8-methyladenine |
| acyl | acyl | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| acyl | acyl | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| acyl | acyl | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| acyl | acyl | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| acyl | acyl | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | acyl | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | acyl | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | acyl | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| acyl | acyl | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | amino acid | $CH_3$ | O | 6-Methylthymine |
| acyl | amino acid | $CH_3$ | O | 6-Methyluracil |
| acyl | amino acid | $CH_3$ | O | 8-Methylguanine |
| acyl | amino acid | $CH_3$ | O | 6-Methylcytosine |
| acyl | amino acid | $CH_3$ | O | 8-Methyladenine |
| acyl | amino acid | $CH_3$ | O | 8-Methylhypoxanthine |
| acyl | amino acid | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| acyl | amino acid | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| acyl | amino acid | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| acyl | amino acid | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| acyl | amino acid | $CH_3$ | O | 2-amino-8-methyladenine |
| acyl | amino acid | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| acyl | amino acid | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| acyl | amino acid | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| acyl | amino acid | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| acyl | amino acid | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | amino acid | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | amino acid | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | amino acid | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| acyl | amino acid | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| H | acyl | $CH_3$ | O | 6-Methylthymine |
| H | acyl | $CH_3$ | O | 6-Methyluracil |
| H | acyl | $CH_3$ | O | 8-Methylguanine |
| H | acyl | $CH_3$ | O | 6-Methylcytosine |
| H | acyl | $CH_3$ | O | 8-Methyladenine |
| H | acyl | $CH_3$ | O | 8-Methylhypoxanthine |
| H | acyl | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| H | acyl | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| H | acyl | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| H | acyl | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| H | acyl | $CH_3$ | O | 2-amino-8-methyladenine |
| H | acyl | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| H | acyl | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| H | acyl | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| H | acyl | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| H | acyl | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| H | acyl | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| H | acyl | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| H | acyl | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| H | acyl | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| H | amino acid | $CH_3$ | O | 6-Methylthymine |
| H | amino acid | $CH_3$ | O | 6-Methyluracil |
| H | amino acid | $CH_3$ | O | 8-Methylguanine |
| H | amino acid | $CH_3$ | O | 6-Methylcytosine |
| H | amino acid | $CH_3$ | O | 8-Methyladenine |
| H | amino acid | $CH_3$ | O | 8-Methylhypoxanthine |
| H | amino acid | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| H | amino acid | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| H | amino acid | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| H | amino acid | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| H | amino acid | $CH_3$ | O | 2-amino-8-methyladenine |
| H | amino acid | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| H | amino acid | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| H | amino acid | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| H | amino acid | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| H | amino acid | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| H | amino acid | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| H | amino acid | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| H | amino acid | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| H | amino acid | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | amino acid | $CH_3$ | O | 6-Methylthymine |
| amino acid | amino acid | $CH_3$ | O | 6-Methyluracil |
| amino acid | amino acid | $CH_3$ | O | 8-Methylguanine |
| amino acid | amino acid | $CH_3$ | O | 6-Methylcytosine |
| amino acid | amino acid | $CH_3$ | O | 8-Methyladenine |
| amino acid | amino acid | $CH_3$ | O | 8-Methylhypoxanthine |
| amino acid | amino acid | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| amino acid | amino acid | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| amino acid | amino acid | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| amino acid | amino acid | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| amino acid | amino acid | $CH_3$ | O | 2-amino-8-methyladenine |
| amino acid | amino acid | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| amino acid | amino acid | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| amino acid | amino acid | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| amino acid | amino acid | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| amino acid | amino acid | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | amino acid | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | amino acid | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | amino acid | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| amino acid | amino acid | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | H | $CH_3$ | O | 6-Methylthymine |
| amino acid | H | $CH_3$ | O | 6-Methyluracil |
| amino acid | H | $CH_3$ | O | 8-Methylguanine |
| amino acid | H | $CH_3$ | O | 6-Methylcytosine |

TABLE 21-continued

| $R^2$ | $R^3$ | $R^6$ | X | Base |
|---|---|---|---|---|
| amino acid | H | $CH_3$ | O | 8-Methyladenine |
| amino acid | H | $CH_3$ | O | 8-Methylhypoxanthine |
| amino acid | H | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| amino acid | H | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| amino acid | H | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| amino acid | H | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| amino acid | H | $CH_3$ | O | 2-amino-8-methyladenine |
| amino acid | H | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| amino acid | H | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| amino acid | H | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| amino acid | H | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| amino acid | H | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | H | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | H | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | H | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| amino acid | H | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | acyl | $CH_3$ | O | 6-Methylthymine |
| amino acid | acyl | $CH_3$ | O | 6-Methyluracil |
| amino acid | acyl | $CH_3$ | O | 8-Methylguanine |
| amino acid | acyl | $CH_3$ | O | 6-Methylcytosine |
| amino acid | acyl | $CH_3$ | O | 8-Methyladenine |
| amino acid | acyl | $CH_3$ | O | 8-Methylhypoxanthine |
| amino acid | acyl | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| amino acid | acyl | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| amino acid | acyl | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| amino acid | acyl | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| amino acid | acyl | $CH_3$ | O | 2-amino-8-methyladenine |
| amino acid | acyl | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| amino acid | acyl | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| amino acid | acyl | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| amino acid | acyl | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| amino acid | acyl | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | acyl | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | acyl | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | acyl | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| amino acid | acyl | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | H | $CF_3$ | O | 6-Methylthymine |
| acyl | H | $CF_3$ | O | 6-Methyluracil |
| acyl | H | $CF_3$ | O | 8-Methylguanine |
| acyl | H | $CF_3$ | O | 6-Methylcytosine |
| acyl | H | $CF_3$ | O | 8-Methyladenine |
| acyl | H | $CF_3$ | O | 8-Methylhypoxanthine |
| acyl | H | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| acyl | H | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| acyl | H | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| acyl | H | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| acyl | H | $CF_3$ | O | 2-amino-8-methyladenine |
| acyl | H | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| acyl | H | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| acyl | H | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| acyl | H | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| acyl | H | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | H | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | H | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | H | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| acyl | H | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | acyl | $CF_3$ | O | 6-Methylthymine |
| acyl | acyl | $CF_3$ | O | 6-Methyluracil |
| acyl | acyl | $CF_3$ | O | 8-Methylguanine |
| acyl | acyl | $CF_3$ | O | 6-Methylcytosine |
| acyl | acyl | $CF_3$ | O | 8-Methyladenine |
| acyl | acyl | $CF_3$ | O | 8-Methylhypoxanthine |
| acyl | acyl | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| acyl | acyl | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| acyl | acyl | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| acyl | acyl | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| acyl | acyl | $CF_3$ | O | 2-amino-8-methyladenine |
| acyl | acyl | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| acyl | acyl | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| acyl | acyl | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| acyl | acyl | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| acyl | acyl | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | acyl | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | acyl | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | acyl | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| acyl | acyl | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | amino acid | $CF_3$ | O | 6-Methylthymine |
| acyl | amino acid | $CF_3$ | O | 6-Methyluracil |
| acyl | amino acid | $CF_3$ | O | 8-Methylguanine |
| acyl | amino acid | $CF_3$ | O | 6-Methylcytosine |
| acyl | amino acid | $CF_3$ | O | 8-Methyladenine |
| acyl | amino acid | $CF_3$ | O | 8-Methylhypoxanthine |
| acyl | amino acid | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| acyl | amino acid | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| acyl | amino acid | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| acyl | amino acid | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| acyl | amino acid | $CF_3$ | O | 2-amino-8-methyladenine |
| acyl | amino acid | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| acyl | amino acid | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| acyl | amino acid | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| acyl | amino acid | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| acyl | amino acid | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | amino acid | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | amino acid | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | amino acid | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| acyl | amino acid | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| H | acyl | $CF_3$ | O | 6-Methylthymine |
| H | acyl | $CF_3$ | O | 6-Methyluracil |
| H | acyl | $CF_3$ | O | 8-Methylguanine |
| H | acyl | $CF_3$ | O | 6-Methylcytosine |
| H | acyl | $CF_3$ | O | 8-Methyladenine |
| H | acyl | $CF_3$ | O | 8-Methylhypoxanthine |
| H | acyl | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| H | acyl | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| H | acyl | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| H | acyl | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| H | acyl | $CF_3$ | O | 2-amino-8-methyladenine |
| H | acyl | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| H | acyl | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| H | acyl | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| H | acyl | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| H | acyl | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| H | acyl | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| H | acyl | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| H | acyl | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| H | acyl | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| H | amino acid | $CF_3$ | O | 6-Methylthymine |
| H | amino acid | $CF_3$ | O | 6-Methyluracil |
| H | amino acid | $CF_3$ | O | 8-Methylguanine |
| H | amino acid | $CF_3$ | O | 6-Methylcytosine |
| H | amino acid | $CF_3$ | O | 8-Methyladenine |
| H | amino acid | $CF_3$ | O | 8-Methylhypoxanthine |
| H | amino acid | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| H | amino acid | $CF_3$ | O | 5-Fluoro-6-methyluracil |

TABLE 21-continued

| $R^2$ | $R^3$ | $R^6$ | X | Base |
|---|---|---|---|---|
| H | amino acid | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| H | amino acid | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| H | amino acid | $CF_3$ | O | 2-amino-8-methyladenine |
| H | amino acid | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| H | amino acid | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| H | amino acid | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| H | amino acid | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| H | amino acid | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| H | amino acid | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| H | amino acid | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| H | amino acid | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| H | amino acid | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | amino acid | $CF_3$ | O | 6-Methylthymine |
| amino acid | amino acid | $CF_3$ | O | 6-Methyluracil |
| amino acid | amino acid | $CF_3$ | O | 8-Methylguanine |
| amino acid | amino acid | $CF_3$ | O | 6-Methylcytosine |
| amino acid | amino acid | $CF_3$ | O | 8-Methyladenine |
| amino acid | amino acid | $CF_3$ | O | 8-Methylhypoxanthine |
| amino acid | amino acid | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| amino acid | amino acid | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| amino acid | amino acid | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| amino acid | amino acid | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| amino acid | amino acid | $CF_3$ | O | 2-amino-8-methyladenine |
| amino acid | amino acid | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| amino acid | amino acid | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| amino acid | amino acid | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| amino acid | amino acid | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| amino acid | amino acid | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | amino acid | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | amino acid | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | amino acid | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| amino acid | amino acid | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | H | $CF_3$ | O | 6-Methylthymine |
| amino acid | H | $CF_3$ | O | 6-Methyluracil |
| amino acid | H | $CF_3$ | O | 8-Methylguanine |
| amino acid | H | $CF_3$ | O | 6-Methylcytosine |
| amino acid | H | $CF_3$ | O | 8-Methyladenine |
| amino acid | H | $CF_3$ | O | 8-Methylhypoxanthine |
| amino acid | H | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| amino acid | H | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| amino acid | H | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| amino acid | H | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| amino acid | H | $CF_3$ | O | 2-amino-8-methyladenine |
| amino acid | H | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| amino acid | H | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| amino acid | H | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| amino acid | H | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| amino acid | H | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | H | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | H | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | H | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| amino acid | H | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | acyl | $CF_3$ | O | 6-Methylthymine |
| amino acid | acyl | $CF_3$ | O | 6-Methyluracil |
| amino acid | acyl | $CF_3$ | O | 8-Methylguanine |
| amino acid | acyl | $CF_3$ | O | 6-Methylcytosine |
| amino acid | acyl | $CF_3$ | O | 8-Methyladenine |
| amino acid | acyl | $CF_3$ | O | 8-Methylhypoxanthine |
| amino acid | acyl | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| amino acid | acyl | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| amino acid | acyl | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| amino acid | acyl | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| amino acid | acyl | $CF_3$ | O | 2-amino-8-methyladenine |
| amino acid | acyl | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| amino acid | acyl | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| amino acid | acyl | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| amino acid | acyl | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| amino acid | acyl | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | acyl | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | acyl | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | acyl | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| amino acid | acyl | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | H | $CH_3$ | S | 6-Methylthymine |
| acyl | H | $CH_3$ | S | 6-Methyluracil |
| acyl | H | $CH_3$ | S | 8-Methylguanine |
| acyl | H | $CH_3$ | S | 6-Methylcytosine |
| acyl | H | $CH_3$ | S | 8-Methyladenine |
| acyl | H | $CH_3$ | S | 8-Methylhypoxanthine |
| acyl | H | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | H | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | H | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | H | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | H | $CH_3$ | S | 2-amino-8-methyladenine |
| acyl | H | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | H | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | H | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | H | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | H | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | H | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | H | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | H | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | H | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | acyl | $CH_3$ | S | 6-Methylthymine |
| acyl | acyl | $CH_3$ | S | 6-Methyluracil |
| acyl | acyl | $CH_3$ | S | 8-Methylguanine |
| acyl | acyl | $CH_3$ | S | 6-Methylcytosine |
| acyl | acyl | $CH_3$ | S | 8-Methyladenine |
| acyl | acyl | $CH_3$ | S | 8-Methylhypoxanthine |
| acyl | acyl | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | acyl | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | acyl | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | acyl | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | acyl | $CH_3$ | S | 2-amino-8-methyladenine |
| acyl | acyl | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | acyl | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | acyl | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | acyl | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | acyl | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | acyl | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | acyl | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | acyl | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | acyl | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | amino acid | $CH_3$ | S | 6-Methylthymine |
| acyl | amino acid | $CH_3$ | S | 6-Methyluracil |
| acyl | amino acid | $CH_3$ | S | 8-Methylguanine |
| acyl | amino acid | $CH_3$ | S | 6-Methylcytosine |
| acyl | amino acid | $CH_3$ | S | 8-Methyladenine |
| acyl | amino acid | $CH_3$ | S | 8-Methylhypoxanthine |
| acyl | amino acid | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | amino acid | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | amino acid | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | amino acid | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | amino acid | $CH_3$ | S | 2-amino-8-methyladenine |
| acyl | amino acid | $CH_3$ | S | 2-amino-8-methylhypoxanthine |

TABLE 21-continued

| $R^2$ | $R^3$ | $R^6$ | X | Base |
|---|---|---|---|---|
| acyl | amino acid | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | amino acid | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | amino acid | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | amino acid | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | amino acid | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | amino acid | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | amino acid | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | amino acid | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| H | acyl | $CH_3$ | S | 6-Methylthymine |
| H | acyl | $CH_3$ | S | 6-Methyluracil |
| H | acyl | $CH_3$ | S | 8-Methylguanine |
| H | acyl | $CH_3$ | S | 6-Methylcytosine |
| H | acyl | $CH_3$ | S | 8-Methyladenine |
| H | acyl | $CH_3$ | S | 8-Methylhypoxanthine |
| H | acyl | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| H | acyl | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| H | acyl | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| H | acyl | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| H | acyl | $CH_3$ | S | 2-amino-8-methyladenine |
| H | acyl | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| H | acyl | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| H | acyl | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| H | acyl | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| H | acyl | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| H | acyl | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| H | acyl | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| H | acyl | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| H | acyl | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| H | amino acid | $CH_3$ | S | 6-Methylthymine |
| H | amino acid | $CH_3$ | S | 6-Methyluracil |
| H | amino acid | $CH_3$ | S | 8-Methylguanine |
| H | amino acid | $CH_3$ | S | 6-Methylcytosine |
| H | amino acid | $CH_3$ | S | 8-Methyladenine |
| H | amino acid | $CH_3$ | S | 8-Methylhypoxanthine |
| H | amino acid | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| H | amino acid | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| H | amino acid | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| H | amino acid | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| H | amino acid | $CH_3$ | S | 2-amino-8-methyladenine |
| H | amino acid | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| H | amino acid | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| H | amino acid | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| H | amino acid | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| H | amino acid | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| H | amino acid | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| H | amino acid | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| H | amino acid | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| H | amino acid | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | amino acid | $CH_3$ | S | 6-Methylthymine |
| amino acid | amino acid | $CH_3$ | S | 6-Methyluracil |
| amino acid | amino acid | $CH_3$ | S | 8-Methylguanine |
| amino acid | amino acid | $CH_3$ | S | 6-Methylcytosine |
| amino acid | amino acid | $CH_3$ | S | 8-Methyladenine |
| amino acid | amino acid | $CH_3$ | S | 8-Methylhypoxanthine |
| amino acid | amino acid | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | amino acid | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | amino acid | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | amino acid | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | amino acid | $CH_3$ | S | 2-amino-8-methyladenine |
| amino acid | amino acid | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | amino acid | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | amino acid | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |

TABLE 21-continued

| $R^2$ | $R^3$ | $R^6$ | X | Base |
|---|---|---|---|---|
| amino acid | amino acid | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | amino acid | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | amino acid | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | amino acid | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | amino acid | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | amino acid | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | H | $CH_3$ | S | 6-Methylthymine |
| amino acid | H | $CH_3$ | S | 6-Methyluracil |
| amino acid | H | $CH_3$ | S | 8-Methylguanine |
| amino acid | H | $CH_3$ | S | 6-Methylcytosine |
| amino acid | H | $CH_3$ | S | 8-Methyladenine |
| amino acid | H | $CH_3$ | S | 8-Methylhypoxanthine |
| amino acid | H | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | H | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | H | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | H | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | H | $CH_3$ | S | 2-amino-8-methyladenine |
| amino acid | H | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | H | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | H | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | H | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | H | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | H | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | H | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | H | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | H | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | acyl | $CH_3$ | S | 6-Methylthymine |
| amino acid | acyl | $CH_3$ | S | 6-Methyluracil |
| amino acid | acyl | $CH_3$ | S | 8-Methylguanine |
| amino acid | acyl | $CH_3$ | S | 6-Methylcytosine |
| amino acid | acyl | $CH_3$ | S | 8-Methyladenine |
| amino acid | acyl | $CH_3$ | S | 8-Methylhypoxanthine |
| amino acid | acyl | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | acyl | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | acyl | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | acyl | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | acyl | $CH_3$ | S | 2-amino-8-methyladenine |
| amino acid | acyl | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | acyl | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | acyl | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | acyl | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | acyl | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | acyl | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | acyl | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | acyl | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | acyl | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | H | $CF_3$ | S | 6-Methylthymine |
| acyl | H | $CF_3$ | S | 6-Methyluracil |
| acyl | H | $CF_3$ | S | 8-Methylguanine |
| acyl | H | $CF_3$ | S | 6-Methylcytosine |
| acyl | H | $CF_3$ | S | 8-Methyladenine |
| acyl | H | $CF_3$ | S | 8-Methylhypoxanthine |
| acyl | H | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | H | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | H | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | H | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | H | $CF_3$ | S | 2-amino-8-methyladenine |
| acyl | H | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | H | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | H | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | H | $CF_3$ | S | 6-N-acetyl-8-methyladenine |

TABLE 21-continued

| $R^2$ | $R^3$ | $R^6$ | X | Base |
|---|---|---|---|---|
| acyl | H | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | H | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | H | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | H | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | H | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | acyl | $CF_3$ | S | 6-Methylthymine |
| acyl | acyl | $CF_3$ | S | 6-Methyluracil |
| acyl | acyl | $CF_3$ | S | 8-Methylguanine |
| acyl | acyl | $CF_3$ | S | 6-Methylcytosine |
| acyl | acyl | $CF_3$ | S | 8-Methyladenine |
| acyl | acyl | $CF_3$ | S | 8-Methylhypoxanthine |
| acyl | acyl | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | acyl | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | acyl | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | acyl | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | acyl | $CF_3$ | S | 2-amino-8-methyladenine |
| acyl | acyl | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | acyl | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | acyl | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | acyl | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | acyl | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | acyl | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | acyl | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | acyl | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | acyl | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | amino acid | $CF_3$ | S | 6-Methylthymine |
| acyl | amino acid | $CF_3$ | S | 6-Methyluracil |
| acyl | amino acid | $CF_3$ | S | 8-Methylguanine |
| acyl | amino acid | $CF_3$ | S | 6-Methylcytosine |
| acyl | amino acid | $CF_3$ | S | 8-Methyladenine |
| acyl | amino acid | $CF_3$ | S | 8-Methylhypoxanthine |
| acyl | amino acid | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | amino acid | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | amino acid | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | amino acid | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | amino acid | $CF_3$ | S | 2-amino-8-methyladenine |
| acyl | amino acid | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | amino acid | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | amino acid | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | amino acid | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | amino acid | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | amino acid | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | amino acid | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | amino acid | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | amino acid | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| H | acyl | $CF_3$ | S | 6-Methylthymine |
| H | acyl | $CF_3$ | S | 6-Methyluracil |
| H | acyl | $CF_3$ | S | 8-Methylguanine |
| H | acyl | $CF_3$ | S | 6-Methylcytosine |
| H | acyl | $CF_3$ | S | 8-Methyladenine |
| H | acyl | $CF_3$ | S | 8-Methylhypoxanthine |
| H | acyl | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| H | acyl | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| H | acyl | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| H | acyl | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| H | acyl | $CF_3$ | S | 2-amino-8-methyladenine |
| H | acyl | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| H | acyl | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| H | acyl | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| H | acyl | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| H | acyl | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |

TABLE 21-continued

| $R^2$ | $R^3$ | $R^6$ | X | Base |
|---|---|---|---|---|
| H | acyl | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| H | acyl | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| H | acyl | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| H | acyl | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| H | amino acid | $CF_3$ | S | 6-Methylthymine |
| H | amino acid | $CF_3$ | S | 6-Methyluracil |
| H | amino acid | $CF_3$ | S | 8-Methylguanine |
| H | amino acid | $CF_3$ | S | 6-Methylcytosine |
| H | amino acid | $CF_3$ | S | 8-Methyladenine |
| H | amino acid | $CF_3$ | S | 8-Methylhypoxanthine |
| H | amino acid | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| H | amino acid | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| H | amino acid | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| H | amino acid | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| H | amino acid | $CF_3$ | S | 2-amino-8-methyladenine |
| H | amino acid | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| H | amino acid | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| H | amino acid | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| H | amino acid | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| H | amino acid | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| H | amino acid | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| H | amino acid | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| H | amino acid | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| H | amino acid | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | amino acid | $CF_3$ | S | 6-Methylthymine |
| amino acid | amino acid | $CF_3$ | S | 6-Methyluracil |
| amino acid | amino acid | $CF_3$ | S | 8-Methylguanine |
| amino acid | amino acid | $CF_3$ | S | 6-Methylcytosine |
| amino acid | amino acid | $CF_3$ | S | 8-Methyladenine |
| amino acid | amino acid | $CF_3$ | S | 8-Methylhypoxanthine |
| amino acid | amino acid | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | amino acid | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | amino acid | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | amino acid | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | amino acid | $CF_3$ | S | 2-amino-8-methyladenine |
| amino acid | amino acid | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | amino acid | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | amino acid | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | amino acid | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | amino acid | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | amino acid | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | amino acid | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | amino acid | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | amino acid | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | H | $CF_3$ | S | 6-Methylthymine |
| amino acid | H | $CF_3$ | S | 6-Methyluracil |
| amino acid | H | $CF_3$ | S | 8-Methylguanine |
| amino acid | H | $CF_3$ | S | 6-Methylcytosine |
| amino acid | H | $CF_3$ | S | 8-Methyladenine |
| amino acid | H | $CF_3$ | S | 8-Methylhypoxanthine |
| amino acid | H | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | H | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | H | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | H | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | H | $CF_3$ | S | 2-amino-8-methyladenine |
| amino acid | H | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | H | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | H | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | H | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | H | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | H | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |

TABLE 21-continued

| $R^2$ | $R^3$ | $R^6$ | X | Base |
|---|---|---|---|---|
| amino acid | H | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | H | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | H | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | acyl | $CF_3$ | S | 6-Methylthymine |
| amino acid | acyl | $CF_3$ | S | 6-Methyluracil |
| amino acid | acyl | $CF_3$ | S | 8-Methylguanine |
| amino acid | acyl | $CF_3$ | S | 6-Methylcytosine |
| amino acid | acyl | $CF_3$ | S | 8-Methyladenine |
| amino acid | acyl | $CF_3$ | S | 8-Methylhypoxanthine |
| amino acid | acyl | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | acyl | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | acyl | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | acyl | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | acyl | $CF_3$ | S | 2-amino-8-methyladenine |
| amino acid | acyl | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | acyl | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | acyl | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | acyl | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | acyl | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | acyl | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | acyl | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | acyl | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | acyl | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |

TABLE 22

| $R^2$ | $R^6$ | X | Base |
|---|---|---|---|
| acyl | $CH_3$ | O | 6-Methylthymine |
| acyl | $CH_3$ | O | 6-Methyluracil |
| acyl | $CH_3$ | O | 8-Methylguanine |
| acyl | $CH_3$ | O | 6-Methylcytosine |
| acyl | $CH_3$ | O | 8-Methyladenine |
| acyl | $CH_3$ | O | 8-Methylhypoxanthine |
| acyl | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| acyl | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| acyl | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| acyl | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CH_3$ | O | 2-amino-8-methyladenine |
| acyl | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| acyl | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| acyl | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| acyl | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| acyl | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| acyl | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CH_3$ | O | 6-Methylthymine |
| amino acid | $CH_3$ | O | 6-Methyluracil |
| amino acid | $CH_3$ | O | 8-Methylguanine |
| amino acid | $CH_3$ | O | 6-Methylcytosine |
| amino acid | $CH_3$ | O | 8-Methyladenine |
| amino acid | $CH_3$ | O | 8-Methylhypoxanthine |
| amino acid | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| amino acid | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| amino acid | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| amino acid | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CH_3$ | O | 2-amino-8-methyladenine |
| amino acid | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| amino acid | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| amino acid | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| amino acid | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| amino acid | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |

TABLE 22-continued

| $R^2$ | $R^6$ | X | Base |
|---|---|---|---|
| amino acid | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| amino acid | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | $CF_3$ | O | 6-Methylthymine |
| acyl | $CF_3$ | O | 6-Methyluracil |
| acyl | $CF_3$ | O | 8-Methylguanine |
| acyl | $CF_3$ | O | 6-Methylcytosine |
| acyl | $CF_3$ | O | 8-Methyladenine |
| acyl | $CF_3$ | O | 8-Methylhypoxanthine |
| acyl | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| acyl | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| acyl | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| acyl | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CF_3$ | O | 2-amino-8-methyladenine |
| acyl | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| acyl | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| acyl | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| acyl | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| acyl | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| acyl | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CF_3$ | O | 6-Methylthymine |
| amino acid | $CF_3$ | O | 6-Methyluracil |
| amino acid | $CF_3$ | O | 8-Methylguanine |
| amino acid | $CF_3$ | O | 6-Methylcytosine |
| amino acid | $CF_3$ | O | 8-Methyladenine |
| amino acid | $CF_3$ | O | 8-Methylhypoxanthine |
| amino acid | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| amino acid | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| amino acid | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| amino acid | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CF_3$ | O | 2-amino-8-methyladenine |
| amino acid | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| amino acid | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| amino acid | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| amino acid | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| amino acid | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| amino acid | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | $CH_3$ | S | 6-Methylthymine |
| acyl | $CH_3$ | S | 6-Methyluracil |
| acyl | $CH_3$ | S | 8-Methylguanine |
| acyl | $CH_3$ | S | 6-Methylcytosine |
| acyl | $CH_3$ | S | 8-Methyladenine |
| acyl | $CH_3$ | S | 8-Methylhypoxanthine |
| acyl | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CH_3$ | S | 2-amino-8-methyladenine |
| acyl | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CH_3$ | S | 6-Methylthymine |
| amino acid | $CH_3$ | S | 6-Methyluracil |
| amino acid | $CH_3$ | S | 8-Methylguanine |
| amino acid | $CH_3$ | S | 6-Methylcytosine |
| amino acid | $CH_3$ | S | 8-Methyladenine |
| amino acid | $CH_3$ | S | 8-Methylhypoxanthine |
| amino acid | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CH_3$ | S | 2-amino-8-methyladenine |
| amino acid | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | $CH_3$ | S | 6-N-acetyl-8-methyladenine |

TABLE 22-continued

| $R^2$ | $R^6$ | X | Base |
|---|---|---|---|
| amino acid | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | $CF_3$ | S | 6-Methylthymine |
| acyl | $CF_3$ | S | 6-Methyluracil |
| acyl | $CF_3$ | S | 8-Methylguanine |
| acyl | $CF_3$ | S | 6-Methylcytosine |
| acyl | $CF_3$ | S | 8-Methyladenine |
| acyl | $CF_3$ | S | 8-Methylhypoxanthine |
| acyl | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CF_3$ | S | 2-amino-8-methyladenine |
| acyl | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CF_3$ | S | 6-Methylthymine |
| amino acid | $CF_3$ | S | 6-Methyluracil |
| amino acid | $CF_3$ | S | 8-Methylguanine |
| amino acid | $CF_3$ | S | 6-Methylcytosine |
| amino acid | $CF_3$ | S | 8-Methyladenine |
| amino acid | $CF_3$ | S | 8-Methylhypoxanthine |
| amino acid | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CF_3$ | S | 2-amino-8-methyladenine |
| amino acid | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |

TABLE 23

| $R^2$ | $R^6$ | X | Base |
|---|---|---|---|
| acyl | $CH_3$ | O | 6-Methylthymine |
| acyl | $CH_3$ | O | 6-Methyluracil |
| acyl | $CH_3$ | O | 8-Methylguanine |
| acyl | $CH_3$ | O | 6-Methylcytosine |
| acyl | $CH_3$ | O | 8-Methyladenine |
| acyl | $CH_3$ | O | 8-Methylhypoxanthine |
| acyl | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| acyl | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| acyl | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| acyl | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CH_3$ | O | 2-amino-8-methyladenine |
| acyl | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| acyl | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| acyl | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| acyl | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| acyl | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| acyl | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CH_3$ | O | 6-Methylthymine |
| amino acid | $CH_3$ | O | 6-Methyluracil |
| amino acid | $CH_3$ | O | 8-Methylguanine |
| amino acid | $CH_3$ | O | 6-Methylcytosine |

TABLE 23-continued

| $R^2$ | $R^6$ | X | Base |
|---|---|---|---|
| amino acid | $CH_3$ | O | 8-Methyladenine |
| amino acid | $CH_3$ | O | 8-Methylhypoxanthine |
| amino acid | $CH_3$ | O | 5-Fluoro-6-methylcytosine |
| amino acid | $CH_3$ | O | 5-Fluoro-6-methyluracil |
| amino acid | $CH_3$ | O | 2-Fluoro-8-methyladenine |
| amino acid | $CH_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CH_3$ | O | 2-amino-8-methyladenine |
| amino acid | $CH_3$ | O | 2-amino-8-methylhypoxanthine |
| amino acid | $CH_3$ | O | 2-N-acetyl-8-methylguanine |
| amino acid | $CH_3$ | O | 4-N-acetyl-8-methylcytosine |
| amino acid | $CH_3$ | O | 6-N-acetyl-8-methyladenine |
| amino acid | $CH_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CH_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CH_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CH_3$ | O | 2-N-acetylamino-8-methyladenine |
| amino acid | $CH_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | $CF_3$ | O | 6-Methylthymine |
| acyl | $CF_3$ | O | 6-Methyluracil |
| acyl | $CF_3$ | O | 8-Methylguanine |
| acyl | $CF_3$ | O | 6-Methylcytosine |
| acyl | $CF_3$ | O | 8-Methyladenine |
| acyl | $CF_3$ | O | 8-Methylhypoxanthine |
| acyl | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| acyl | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| acyl | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| acyl | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CF_3$ | O | 2-amino-8-methyladenine |
| acyl | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| acyl | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| acyl | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| acyl | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| acyl | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| acyl | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CF_3$ | O | 6-Methylthymine |
| amino acid | $CF_3$ | O | 6-Methyluracil |
| amino acid | $CF_3$ | O | 8-Methylguanine |
| amino acid | $CF_3$ | O | 6-Methylcytosine |
| amino acid | $CF_3$ | O | 8-Methyladenine |
| amino acid | $CF_3$ | O | 8-Methylhypoxanthine |
| amino acid | $CF_3$ | O | 5-Fluoro-6-methylcytosine |
| amino acid | $CF_3$ | O | 5-Fluoro-6-methyluracil |
| amino acid | $CF_3$ | O | 2-Fluoro-8-methyladenine |
| amino acid | $CF_3$ | O | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CF_3$ | O | 2-amino-8-methyladenine |
| amino acid | $CF_3$ | O | 2-amino-8-methylhypoxanthine |
| amino acid | $CF_3$ | O | 2-N-acetyl-8-methylguanine |
| amino acid | $CF_3$ | O | 4-N-acetyl-8-methylcytosine |
| amino acid | $CF_3$ | O | 6-N-acetyl-8-methyladenine |
| amino acid | $CF_3$ | O | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CF_3$ | O | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CF_3$ | O | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CF_3$ | O | 2-N-acetylamino-8-methyladenine |
| amino acid | $CF_3$ | O | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | $CH_3$ | S | 6-Methylthymine |
| acyl | $CH_3$ | S | 6-Methyluracil |
| acyl | $CH_3$ | S | 8-Methylguanine |
| acyl | $CH_3$ | S | 6-Methylcytosine |
| acyl | $CH_3$ | S | 8-Methyladenine |
| acyl | $CH_3$ | S | 8-Methylhypoxanthine |
| acyl | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CH_3$ | S | 2-amino-8-methyladenine |
| acyl | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CH_3$ | S | 6-Methylthymine |

TABLE 23-continued

| $R^2$ | $R^6$ | X | Base |
|---|---|---|---|
| amino acid | $CH_3$ | S | 6-Methyluracil |
| amino acid | $CH_3$ | S | 8-Methylguanine |
| amino acid | $CH_3$ | S | 6-Methylcytosine |
| amino acid | $CH_3$ | S | 8-Methyladenine |
| amino acid | $CH_3$ | S | 8-Methylhypoxanthine |
| amino acid | $CH_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | $CH_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | $CH_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | $CH_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CH_3$ | S | 2-amino-8-methyladenine |
| amino acid | $CH_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | $CH_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | $CH_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | $CH_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | $CH_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CH_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CH_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CH_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | $CH_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| acyl | $CF_3$ | S | 6-Methylthymine |
| acyl | $CF_3$ | S | 6-Methyluracil |
| acyl | $CF_3$ | S | 8-Methylguanine |
| acyl | $CF_3$ | S | 6-Methylcytosine |
| acyl | $CF_3$ | S | 8-Methyladenine |
| acyl | $CF_3$ | S | 8-Methylhypoxanthine |
| acyl | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| acyl | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| acyl | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| acyl | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| acyl | $CF_3$ | S | 2-amino-8-methyladenine |

TABLE 23-continued

| $R^2$ | $R^6$ | X | Base |
|---|---|---|---|
| acyl | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| acyl | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| acyl | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| acyl | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| acyl | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| acyl | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| acyl | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| acyl | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| acyl | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |
| amino acid | $CF_3$ | S | 6-Methylthymine |
| amino acid | $CF_3$ | S | 6-Methyluracil |
| amino acid | $CF_3$ | S | 8-Methylguanine |
| amino acid | $CF_3$ | S | 6-Methylcytosine |
| amino acid | $CF_3$ | S | 8-Methyladenine |
| amino acid | $CF_3$ | S | 8-Methylhypoxanthine |
| amino acid | $CF_3$ | S | 5-Fluoro-6-methylcytosine |
| amino acid | $CF_3$ | S | 5-Fluoro-6-methyluracil |
| amino acid | $CF_3$ | S | 2-Fluoro-8-methyladenine |
| amino acid | $CF_3$ | S | 2-Fluoro-8-methylhypoxanthine |
| amino acid | $CF_3$ | S | 2-amino-8-methyladenine |
| amino acid | $CF_3$ | S | 2-amino-8-methylhypoxanthine |
| amino acid | $CF_3$ | S | 2-N-acetyl-8-methylguanine |
| amino acid | $CF_3$ | S | 4-N-acetyl-8-methylcytosine |
| amino acid | $CF_3$ | S | 6-N-acetyl-8-methyladenine |
| amino acid | $CF_3$ | S | 4-N-acetyl-5-fluoro-8-methylcytosine |
| amino acid | $CF_3$ | S | 6-N-acetyl-2-fluoro-8-methyladenine |
| amino acid | $CF_3$ | S | 6-N-acetyl-2-amino-8-methyladenine |
| amino acid | $CF_3$ | S | 2-N-acetylamino-8-methyladenine |
| amino acid | $CF_3$ | S | 2-N-acetylamino-8-methylhypoxanthine |

TABLE 24

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | F | H |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | F | H |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | F | H |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | F | H |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | F | H |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | F | H |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | F | H |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | F | H |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | F | H |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | F | OH |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | F | OH |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | F | OH |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | F | OH |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | F | OH |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | Br | H |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | Br | H |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | Br | H |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | Br | H |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | Br | H |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Br | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | Br | OH |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | Br | OH |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | Br | OH |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | Br | OH |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | Br | OH |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | Cl | OH |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | Cl | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | Cl | H |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | Cl | H |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | Cl | H |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | Cl | H |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | Cl | H |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | H | H |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | H | H |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | H | H |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | H | H |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | H | H |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | H | H |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | H | H |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | H | H |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | H | H |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | H | OH |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | H | OH |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | H | OH |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | H | OH |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | H | OH |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | F | O | 6-Methylthymine | OH | H |
| $CH_3$ | O-acyl | F | O | 6-Methyluracil | OH | H |
| $CH_3$ | O-acyl | F | O | 8-Methylguanine | OH | H |
| $CH_3$ | O-acyl | F | O | 6-Methylcytosine | OH | H |
| $CH_3$ | O-acyl | F | O | 8-Methyladenine | OH | H |
| $CH_3$ | O-acyl | F | O | 8-Methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CH_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | OH | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | F | H |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | F | H |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | F | H |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | F | H |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | F | H |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | F | H |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | F | H |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | F | H |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | F | H |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | F | OH |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | F | OH |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | F | OH |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | F | OH |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | F | OH |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | F | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | Br | H |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | Br | H |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | Br | H |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | Br | H |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | Br | H |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | Br | OH |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | Br | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | Cl | H |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | H | H |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | H | H |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | H | H |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | H | H |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | H | H |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | H | H |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | H | H |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | H | H |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | H | H |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | H | OH |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | H | OH |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | H | OH |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | H | OH |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | H | OH |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | Br | O | 6-Methylthymine | OH | H |
| $CH_3$ | O-acyl | Br | O | 6-Methyluracil | OH | H |
| $CH_3$ | O-acyl | Br | O | 8-Methylguanine | OH | H |
| $CH_3$ | O-acyl | Br | O | 6-Methylcytosine | OH | H |
| $CH_3$ | O-acyl | Br | O | 8-Methyladenine | OH | H |
| $CH_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CH_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | F | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | F | H |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | F | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | F | H |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | F | H |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | F | H |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | F | H |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | F | H |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | F | H |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | F | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | F | OH |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | Br | H |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Br | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | H | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | H | H |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | H | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | H | H |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | H | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | H | H |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | H | H |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | H | H |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | H | H |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | H | OH |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | H | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | Cl | O | 6-Methylthymine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methyluracil | OH | H |
| $CH_3$ | O-acyl | Cl | O | 8-Methylguanine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 6-Methylcytosine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 8-Methyladenine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CH_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | F | H |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | F | H |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | F | H |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | F | H |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | F | H |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | F | H |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | F | H |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | F | H |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | F | H |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | F | OH |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | F | OH |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | F | OH |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | F | OH |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | F | OH |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | Br | H |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | Br | H |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | Br | H |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | Br | H |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | Br | H |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | Br | OH |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | Br | OH |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | Br | OH |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | Br | OH |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | Br | OH |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | Cl | H |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | Cl | H |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | Cl | H |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | Cl | H |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | Cl | H |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | Cl | OH |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | H | H |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | H | H |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | H | H |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | H | H |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | H | H |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | H | H |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | H | H |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | H | H |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | H | H |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | H | OH |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | H | OH |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | H | OH |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | H | OH |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | H | OH |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-acyl | H | O | 6-Methylthymine | OH | H |
| $CH_3$ | O-acyl | H | O | 6-Methyluracil | OH | H |
| $CH_3$ | O-acyl | H | O | 8-Methylguanine | OH | H |
| $CH_3$ | O-acyl | H | O | 6-Methylcytosine | OH | H |
| $CH_3$ | O-acyl | H | O | 8-Methyladenine | OH | H |
| $CH_3$ | O-acyl | H | O | 8-Methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CH_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CH_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | F | H |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | F | H |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | F | H |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | F | H |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | F | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | F | H |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | F | H |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | F | OH |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | F | OH |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | F | OH |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | F | OH |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | F | OH |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | F | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | Br | H |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | Br | H |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | Br | H |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | Br | H |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | Br | H |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | Br | OH |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Br | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | Cl | H |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | Cl | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | H | H |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | H | H |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | H | H |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | H | H |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | H | H |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | H | H |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | H | H |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | H | OH |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | H | OH |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | H | OH |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | H | OH |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | H | OH |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | F | O | 6-Methylthymine | OH | H |
| $CH_3$ | O-amino acid | F | O | 6-Methyluracil | OH | H |
| $CH_3$ | O-amino acid | F | O | 8-Methylguanine | OH | H |
| $CH_3$ | O-amino acid | F | O | 6-Methylcytosine | OH | H |
| $CH_3$ | O-amino acid | F | O | 8-Methyladenine | OH | H |
| $CH_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CH_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | F | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | F | H |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | F | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | F | H |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | F | H |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | F | H |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | F | H |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | F | OH |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | Br | H |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | Br | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Cl | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | H | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | H | H |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | H | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | H | H |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | H | H |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | H | H |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | H | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | H | H |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | H | OH |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | Br | O | 6-Methylthymine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methyluracil | OH | H |
| $CH_3$ | O-amino acid | Br | O | 8-Methylguanine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 6-Methylcytosine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 8-Methyladenine | OH | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CH_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | F | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | F | H |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | H | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | H | H |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylthymine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methyluracil | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylguanine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 6-Methylcytosine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methyladenine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | F | H |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | F | H |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | F | H |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | F | H |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | F | H |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | F | H |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | F | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | F | H |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | F | OH |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | F | OH |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | F | OH |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | F | OH |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | F | OH |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | Br | H |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | Br | H |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | Br | H |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | Br | H |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | Br | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | Br | OH |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Br | OH |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | Cl | H |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Cl | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | H | H |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | H | H |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | H | H |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | H | H |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | H | H |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | H | H |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | H | H |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | H | OH |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | H | OH |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | H | OH |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | H | OH |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | H | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CH_3$ | O-amino acid | H | O | 6-Methylthymine | OH | H |
| $CH_3$ | O-amino acid | H | O | 6-Methyluracil | OH | H |
| $CH_3$ | O-amino acid | H | O | 8-Methylguanine | OH | H |
| $CH_3$ | O-amino acid | H | O | 6-Methylcytosine | OH | H |
| $CH_3$ | O-amino acid | H | O | 8-Methyladenine | OH | H |
| $CH_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CH_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CH_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CH_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CH_3$ | OH | F | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | OH | F | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | OH | F | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | OH | F | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | OH | F | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | OH | F | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | F | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | F | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | OH | F | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | OH | F | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | OH | F | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | OH | F | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | OH | F | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | F | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | F | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | OH | F | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | F | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | OH | F | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | OH | F | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | OH | F | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | OH | F | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | OH | F | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | F | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | F | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | F | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | OH | F | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | F | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | OH | F | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | OH | F | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | OH | F | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | OH | F | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | OH | F | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | F | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | F | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | OH | F | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | OH | F | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | OH | F | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | OH | F | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | OH | F | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | F | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | Br | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | OH | Br | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | Br | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | OH | Br | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | OH | Br | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | OH | Br | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | OH | Br | O | 8-Methyladenine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | OH | Br | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | Br | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | Br | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | Br | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | OH | Br | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | Br | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | Br | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | Br | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | OH | Br | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | Br | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | OH | Br | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | OH | Br | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | OH | Br | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | OH | Br | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | OH | Br | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | Br | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | OH | Cl | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | Cl | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | Cl | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 8-Methyladenine | Cl | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | OH | Cl | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | Cl | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | Cl | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | OH | Cl | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | H | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | OH | H | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | OH | H | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | OH | H | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | OH | H | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | OH | H | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | H | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | OH | H | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | OH | H | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | OH | H | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | OH | H | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | OH | H | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | OH | H | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | H | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | OH | H | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | OH | H | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | OH | H | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | OH | H | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | OH | H | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | OH | H | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | OH | H | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | OH | H | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | H | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | OH | H | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | OH | H | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | OH | H | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | OH | H | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | OH | H | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | OH | H | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | OH | H | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | OH | H | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | OH | H | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | H | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | OH | H | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | OH | H | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | OH | H | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | OH | H | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | OH | H | O | 8-Methyladenine | H | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | OH | H | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | H | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | F | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | H | F | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | H | F | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | H | F | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | H | F | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | H | F | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | H | F | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | F | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | F | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | H | F | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | F | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | H | F | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | H | F | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | H | F | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | H | F | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | H | F | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | H | F | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | F | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | F | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | H | F | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | F | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | H | F | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | H | F | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | H | F | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | H | F | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | H | F | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | H | F | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | F | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | F | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | H | F | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | F | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | H | F | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | H | F | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | H | F | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | H | F | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | H | F | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | H | F | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | F | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | F | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | H | F | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | F | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | H | F | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | F | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | H | F | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | H | F | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | H | F | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | H | F | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | H | F | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | H | F | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | F | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | F | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | H | F | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | F | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | H | F | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | H | F | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | H | F | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | H | F | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | H | F | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | H | F | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | F | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | H | F | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | H | F | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | F | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | H | F | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | H | F | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | H | F | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | H | F | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | H | F | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | H | F | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | F | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | F | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | H | F | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | Br | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | H | Br | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | H | Br | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | H | Br | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | H | Br | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | H | Br | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | Br | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | Br | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | H | Br | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | H | Br | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | H | Br | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | H | Br | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | H | Br | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | Br | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | Br | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | H | Br | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 8-Methyladenine | Br | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | H | Br | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | Br | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | H | Br | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | H | Br | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | H | Br | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | H | Br | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | H | Br | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | Br | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | Br | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | Br | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | H | Br | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | Br | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | H | Br | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | H | Br | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | H | Br | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | H | Br | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | H | Br | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | Br | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | Br | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | H | Br | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | H | Br | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | H | Br | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | H | Br | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | H | Br | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | Br | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | Cl | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | H | Cl | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | Cl | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | H | Cl | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | H | Cl | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | H | Cl | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | H | Cl | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | H | Cl | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | Cl | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | Cl | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | Cl | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | H | Cl | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | Cl | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | Cl | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 8-Methyladenine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | H | Cl | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | Cl | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | H | Cl | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | Cl | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | H | Cl | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | H | Cl | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | H | Cl | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | H | Cl | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | H | Cl | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | Cl | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | H | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | H | H | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | H | H | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | H | H | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | H | H | O | 8-Methyladenine | F | O-amino acid |
| $CH_3$ | H | H | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | H | H | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | H | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | H | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | H | H | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | H | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | H | H | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | H | H | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | H | H | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | H | H | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | H | H | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | H | H | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | H | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | H | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | H | H | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | H | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | H | H | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | H | H | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | H | H | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | H | H | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | H | H | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | H | H | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | H | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | H | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | H | H | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | H | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | H | H | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | H | H | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | H | H | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | H | H | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | H | H | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | H | H | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | H | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | H | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | H | H | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | H | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | H | H | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | H | H | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | H | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | H | H | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | H | H | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | H | H | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | H | H | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | H | H | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | H | H | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | H | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | H | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | H | H | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | H | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | H | H | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | H | H | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | H | H | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | H | H | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | H | H | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | H | H | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | H | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | H | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | H | H | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | H | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | H | H | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | H | H | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | H | H | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | H | H | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | H | H | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | H | H | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | H | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | H | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | H | H | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | OH | O | 6-Methylthymine | F | O-amino acid |
| $CH_3$ | H | OH | O | 6-Methyluracil | F | O-amino acid |
| $CH_3$ | H | OH | O | 8-Methylguanine | F | O-amino acid |
| $CH_3$ | H | OH | O | 6-Methylcytosine | F | O-amino acid |
| $CH_3$ | H | OH | O | 8-Methyladenine | F | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | H | OH | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | OH | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CH_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CH_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CH_3$ | H | OH | O | 6-Methylthymine | F | O-acyl |
| $CH_3$ | H | OH | O | 6-Methyluracil | F | O-acyl |
| $CH_3$ | H | OH | O | 8-Methylguanine | F | O-acyl |
| $CH_3$ | H | OH | O | 6-Methylcytosine | F | O-acyl |
| $CH_3$ | H | OH | O | 8-Methyladenine | F | O-acyl |
| $CH_3$ | H | OH | O | 8-Methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | OH | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CH_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CH_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CH_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CH_3$ | H | OH | O | 6-Methylthymine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 6-Methyluracil | Br | O-amino acid |
| $CH_3$ | H | OH | O | 8-Methylguanine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 8-Methyladenine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CH_3$ | H | OH | O | 6-Methylthymine | Br | O-acyl |
| $CH_3$ | H | OH | O | 6-Methyluracil | Br | O-acyl |
| $CH_3$ | H | OH | O | 8-Methylguanine | Br | O-acyl |
| $CH_3$ | H | OH | O | 6-Methylcytosine | Br | O-acyl |
| $CH_3$ | H | OH | O | 8-Methyladenine | Br | O-acyl |
| $CH_3$ | H | OH | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | OH | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CH_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CH_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CH_3$ | H | OH | O | 6-Methylthymine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 8-Methylguanine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 8-Methyladenine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CH_3$ | H | OH | O | 6-Methylthymine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 6-Methyluracil | Cl | O-acyl |
| $CH_3$ | H | OH | O | 8-Methylguanine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 8-Methyladenine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CH_3$ | H | OH | O | 6-Methylthymine | H | O-amino acid |
| $CH_3$ | H | OH | O | 6-Methyluracil | H | O-amino acid |
| $CH_3$ | H | OH | O | 8-Methylguanine | H | O-amino acid |
| $CH_3$ | H | OH | O | 6-Methylcytosine | H | O-amino acid |
| $CH_3$ | H | OH | O | 8-Methyladenine | H | O-amino acid |
| $CH_3$ | H | OH | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | OH | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CH_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CH_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CH_3$ | H | OH | O | 6-Methylthymine | H | O-acyl |
| $CH_3$ | H | OH | O | 6-Methyluracil | H | O-acyl |
| $CH_3$ | H | OH | O | 8-Methylguanine | H | O-acyl |
| $CH_3$ | H | OH | O | 6-Methylcytosine | H | O-acyl |
| $CH_3$ | H | OH | O | 8-Methyladenine | H | O-acyl |
| $CH_3$ | H | OH | O | 8-Methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CH_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CH_3$ | H | OH | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CH_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CH_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CH_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CH_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CH_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CH_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | F | H |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | F | H |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | F | H |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | F | H |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | F | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Cl | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | H | H |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | H | H |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | H | H |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | H | H |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | H | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | F | H |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | F | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | F | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | F | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | F | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Br | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Cl | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | H | H |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | H | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | H | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | H | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | H | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | F | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | F | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | F | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | H | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | H | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | H | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | F | H |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | F | H |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | F | H |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | F | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | F | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Br | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Cl | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | H | H |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | H | H |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | H | H |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | H | H |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | F | H |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | F | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | F | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Br | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Cl | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | H | H |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | H | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | H | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | H | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | OH | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | F | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | F | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | H | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | H | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | F | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Br | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Br | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | H | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | F | H |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | F | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | F | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Cl | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | H | H |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | H | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | H | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | H | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | OH | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | OH | F | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | OH | F | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | OH | F | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | F | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | F | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | OH | F | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | OH | F | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | F | O | 8-Methyladenine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | F | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | OH | F | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | OH | F | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | F | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methyladenine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | OH | H | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | H | O | 8-Methyladenine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | OH | H | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | H | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | OH | H | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | H | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | F | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | H | F | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | F | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | H | F | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | H | F | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | H | F | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | F | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | F | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | H | F | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | F | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | H | F | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | F | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | H | F | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | F | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | F | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 8-Methyladenine | Cl | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | H | F | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | F | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | H | F | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | F | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | F | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | H | F | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | F | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | H | F | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | H | F | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | H | F | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | F | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | H | Br | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | H | Br | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | Br | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | H | Br | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | Br | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | Br | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | Br | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | H | Br | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | H | Br | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | Br | O | 8-Methyladenine | H | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | H | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | H | H | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | H | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | H | H | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | H | H | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | H | H | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | H | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | H | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | H | H | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | H | O | 8-Methyladenine | Br | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | H | H | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | H | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | H | H | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | H | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | H | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | H | H | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | H | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | H | H | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | H | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | H | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | H | H | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | H | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | H | H | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | H | H | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | H | H | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | H | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | H | OH | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | OH | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | H | OH | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | OH | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 8-Methyladenine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | H | OH | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | OH | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | F | H |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | F | H |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | F | H |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | F | H |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | F | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Br | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | H | H |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | H | H |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | H | H |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | H | H |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | H | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | H | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | F | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-acyl | F | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | F | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-acyl | F | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | F | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-acyl | F | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | F | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | F | H |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | F | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | F | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | F | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | H | H |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | H | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | H | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | H | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Br | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-acyl | Br | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-acyl | Br | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | Br | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | Br | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | F | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | F | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | F | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | F | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | F | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Br | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | Cl | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | H | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | H | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | H | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Cl | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | Cl | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | F | H |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | F | H |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | F | H |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | F | H |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Br | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Cl | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | H | H |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | H | H |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | H | H |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | H | H |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | H | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | H | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-acyl | H | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | H | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-acyl | H | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | H | O | 8-Methyladenine | OH | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | H | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | H | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | F | H |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | F | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | F | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | H | H |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | H | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | H | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | F | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-amino acid | F | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-amino acid | F | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | F | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | F | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | F | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | F | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | F | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Br | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Br | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | Cl | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | H | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | H | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | H | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Br | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | Br | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Cl | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | H | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 2-Amino-8-methylhypoxanthine | OH | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | F | H |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | F | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | F | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | F | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | F | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | F | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Br | H |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Br | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | H | H |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | H | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | H | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | H | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | H | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | H | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | H | O | 6-Methylthymine | OH | H |
| $CF_3$ | O-amino acid | H | O | 6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylguanine | OH | H |
| $CF_3$ | O-amino acid | H | O | 6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | H | O | 8-Methyladenine | OH | H |
| $CF_3$ | O-amino acid | H | O | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | H | O | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | H | O | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | H | O | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | H | O | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | H | O | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | OH | F | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | OH | F | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | OH | F | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | F | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | F | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | OH | F | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | OH | F | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | F | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | F | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | F | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | F | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | OH | F | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | OH | F | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | F | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | OH | F | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | F | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | F | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methyladenine | F | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Br | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | OH | Br | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | OH | Br | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | Br | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Br | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | Br | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | Cl | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | OH | H | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | H | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | OH | H | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | H | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | H | O | 8-Methyladenine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | OH | H | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | OH | H | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | OH | H | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | H | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | OH | H | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | OH | H | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | H | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | OH | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | F | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | H | F | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | F | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | H | F | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | H | F | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | H | F | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | F | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | F | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | H | F | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | F | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | H | F | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | F | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | H | F | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | F | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | F | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | H | F | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | F | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | H | F | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | F | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | F | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | H | F | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | F | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | F | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | H | F | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | H | F | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | H | F | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | F | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | H | F | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | H | F | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | F | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | F | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | H | F | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | F | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | F | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | H | Br | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | H | Br | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | Br | O | 8-Methyladenine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | H | Br | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | Br | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | Br | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | Br | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Br | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | H | Br | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | H | Br | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | H | Br | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | Br | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | H | Br | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | H | Br | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Br | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Br | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Br | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Br | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Br | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methyladenine | Cl | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | Cl | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | H | Cl | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | H | Cl | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | H | Cl | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Cl | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Cl | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Cl | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Cl | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | Cl | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | H | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | H | H | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | H | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | H | H | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | H | H | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | H | H | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | H | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | H | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | H | H | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | H | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | H | H | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | H | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | H | H | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | H | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | H | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | H | H | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | H | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | H | H | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | H | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | H | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | H | H | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | H | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | H | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | H | H | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | H | H | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | H | H | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | H | O | 8-Methyladenine | H | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | H | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | H | H | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | H | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | H | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | H | H | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | H | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | H | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylthymine | F | O-acyl |
| $CF_3$ | H | OH | O | 6-Methyluracil | F | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylguanine | F | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | OH | O | 8-Methyladenine | F | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | H | OH | O | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | OH | O | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | H | OH | O | 6-Methylthymine | H | O-acyl |
| $CF_3$ | H | OH | O | 6-Methyluracil | H | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylguanine | H | O-acyl |
| $CF_3$ | H | OH | O | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | OH | O | 8-Methyladenine | H | O-acyl |
| $CF_3$ | H | OH | O | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | H | OH | O | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | OH | O | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | OH | O | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | H | OH | O | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | H | OH | O | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | H | OH | O | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | F | H |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | F | H |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | F | H |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | F | H |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | F | OH |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | F | OH |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | F | OH |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | Br | H |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | Br | H |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | Br | H |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | Br | OH |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | Br | OH |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | Cl | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | Cl | H |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | Cl | H |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | Cl | H |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | H | H |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | H | H |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | H | H |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | H | H |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | H | OH |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | H | OH |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | H | OH |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | F | S | 6-Methylthymine | OH | H |
| $CF_3$ | O-acyl | F | S | 6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | F | S | 8-Methylguanine | OH | H |
| $CF_3$ | O-acyl | F | S | 6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | F | S | 8-Methyladenine | OH | H |
| $CF_3$ | O-acyl | F | S | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | F | S | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | S | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | S | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | F | S | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | S | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | F | S | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | F | H |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | F | H |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | F | H |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | F | H |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | F | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | F | OH |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | F | OH |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | F | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | Br | H |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | Br | H |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | Br | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | Cl | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | H | H |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | H | H |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | H | H |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | H | H |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | H | OH |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | H | OH |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Br | S | 6-Methylthymine | OH | H |
| $CF_3$ | O-acyl | Br | S | 6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | Br | S | 8-Methylguanine | OH | H |
| $CF_3$ | O-acyl | Br | S | 6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | Br | S | 8-Methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | S | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | Br | S | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | S | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | S | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | S | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Br | S | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | F | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | F | H |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | F | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | Br | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | Cl | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | H | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | H | H |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | H | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | H | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | Cl | S | 6-Methylthymine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | Cl | S | 8-Methylguanine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 8-Methyladenine | OH | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | Cl | S | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | Cl | S | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 2Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | F | H |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | F | H |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | F | H |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | F | H |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | F | OH |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | F | OH |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | F | OH |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | Br | H |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | Br | H |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | Br | H |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | Br | OH |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | Br | OH |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | Cl | H |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | Cl | H |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | H | H |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | H | H |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | H | H |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | H | H |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | H | OH |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | H | OH |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | H | OH |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-acyl | H | S | 6-Methylthymine | OH | H |
| $CF_3$ | O-acyl | H | S | 6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | H | S | 8-Methylguanine | OH | H |
| $CF_3$ | O-acyl | H | S | 6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | H | S | 8-Methyladenine | OH | H |
| $CF_3$ | O-acyl | H | S | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-acyl | H | S | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | S | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | S | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | S | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-acyl | H | S | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | F | H |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | F | H |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | F | H |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | F | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | F | OH |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | F | OH |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | Br | H |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | Br | H |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | Br | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | Br | OH |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | Cl | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | H | H |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | H | H |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | H | H |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | H | OH |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | H | OH |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | H | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | F | S | 6-Methylthymine | OH | H |
| $CF_3$ | O-amino acid | F | S | 6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | F | S | 8-Methylguanine | OH | H |
| $CF_3$ | O-amino acid | F | S | 6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | F | S | 8-Methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | S | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | F | S | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | S | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | S | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | F | S | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | S | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | S | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | F | S | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | F | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | F | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | Cl | O-amino acid |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | H | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | H | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | H | H |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Br | S | 6-Methylthymine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methylguanine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | Br | S | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 2-Amino-8-methylhypoxanthine | OH | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Br | S | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Br | S | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | F | OH |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | H | O-acyl |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylthymine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylguanine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 8-Methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methyluracil | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 5-Fluoro-6-Methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Fluoro-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 2-Amino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetyl-8-methylguanine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 4-N-acetyl-5-fluoro-8-methylcytosine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-fluoro-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 6-N-acetyl-2-amino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methyladenine | OH | H |
| $CF_3$ | O-amino acid | Cl | S | 2-N-acetylamino-8-methylhypoxanthine | OH | H |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | F | H |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | F | H |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | F | H |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | F | H |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | F | H |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | F | H |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | H |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | F | H |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | F | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | F | H |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | F | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | F | OH |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | F | OH |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | F | OH |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | F | OH |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | F | OH |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | F | OH |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | F | OH |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | F | OH |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | Br | H |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | Br | H |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | Br | H |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | Br | H |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | Br | H |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | Br | H |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | H |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | Br | H |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | Br | H |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | Br | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | Br | OH |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | Br | OH |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | Cl | H |

TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | Cl | H |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | H |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | Cl | OH |

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TABLE 24-continued

| $R^6$ | $R^7$ | $R^8$ | X | Base | $R^{10}$ | $R^9$ |
|---|---|---|---|---|---|---|
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | Cl | OH |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | H | H |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | H | H |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | H | H |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | H | H |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | H | H |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | H | H |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | H |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | H | H |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | H | H |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-amino acid |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-N-acetyl-8-methylguanine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 4-N-acetyl-5-fluoro-8-methylcytosine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-fluoro-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-N-acetyl-2-amino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methyladenine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 2-N-acetylamino-8-methylhypoxanthine | H | O-acyl |
| $CF_3$ | O-amino acid | H | S | 6-Methylthymine | H | OH |
| $CF_3$ | O-amino acid | H | S | 6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | H | S | 8-Methylguanine | H | OH |
| $CF_3$ | O-amino acid | H | S | 6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | H | S | 8-Methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | S | 8-Methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methyluracil | H | OH |
| $CF_3$ | O-amino acid | H | S | 5-Fluoro-6-Methylcytosine | H | OH |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | S | 2-Fluoro-8-methylhypoxanthine | H | OH |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methyladenine | H | OH |
| $CF_3$ | O-amino acid | H | S | 2-Amino-8-methylhypoxanthine | H | OH |

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