

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

BECKMAN COULTER, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 24-945 (CFC)
	)	(EGT)
CYTEK BIOSCIENCES, INC.,	)	
	)	
Defendant.	)	

OPENING INVALIDITY EXPERT REPORT OF FEDOR A. ILKOV, PH.D.

Dated: 12/19/2025

Respectfully submitted,


Fedor A. Ilkov, Ph.D.

CYTEK V. BECKMAN
PGR2025-00088
BECKMAN 2058

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

5. The phrase “a substantially full spectrum of visible light” is indefinite (’107, cls. 9, 29)

950. As I have previously noted, claims 9 and 29 of the ’107 patent each recite a flow cytometer “wherein the WDM is capable of detecting a substantially full spectrum of visible light.” In my opinion, the phrase “substantially full spectrum of visible light” is ambiguous and therefore indefinite. There is no mention in the specification of the ’107 patent of any such term since detecting a full spectrum of light is associated with spectral flow cytometry and not the conventional flow cytometry inventions disclosed in the Asserted Patents. There is no use of the phrase “spectrum” anywhere in the specification, let alone “full spectrum.” Accordingly, there is no guidance in the specification for what might constitute a “substantially full spectrum of visible light” and what does not constitute a “substantially full spectrum of visible light.” As a term of degree, “substantially” is ambiguous and subjective as it is used within the phrase “substantially full spectrum of visible light.” Since the specification provides no guidance regarding the meaning of the term, a POSA would not be able to determine the scope of “a substantially full spectrum of visible light” with reasonable certainty and, in my opinion, the term is indefinite.

27:41-44.) Moreover, as I described above, the specification also repeatedly refers to the desirable ability to replace filters to accommodate different dyes within the one-detector-one-dye conventional flow cytometers disclosed in the specification. As I have also described above, one of the hallmarks of such one-detector-one-dye conventional flow cytometers is that there are gaps in the wavelengths of light between the detectors because they are not capable of resolving multiple dyes with overlapping peaks that fall within the same detector channel. As such, a POSA would therefore find the recited phrase “detecting a substantially full spectrum of visible light” to lack any reasonable certainty because a POSA would have understood that conventional flow cytometers are designed to detect non-overlapping bands of light associated with the “fluorescent emission peak” of each dye and therefor do not detect anything remotely close to how a POSA would understand “a substantially full spectrum of visible light.” Hence, a POSA would also find the phrase to be inconsistent with the conventional flow cytometers disclosed in the specification and would have no additional guidance for the meaning of the phrase.

954. Furthermore, the lack of reasonable certainty and arbitrary and subjective nature of the phrase “detecting a substantially full spectrum of visible light” is further demonstrated, in my opinion, by Beckman Coulter’s allegations of infringement against Cytex. In my opinion, a POSA would not find anything within

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the specification to support an interpretation of “detecting a substantially full spectrum of visible light” to include the detection of both conventional flow cytometers (as described in the specification) and spectral flow cytometers (which are not contemplated by the specification). The Asserted Patents are directed to and only disclose features of conventional flow cytometers. Yet, a POSA would not reasonably understand the disclosed conventional flow cytometers to be designed to be “capable of detecting a substantially full spectrum of visible light.” This just would not make sense to a POSA in the context of the one-detector-one-dye conventional flow cytometers disclosed in the patent. Hence, it would be unclear to a POSA what the phrase “detecting a substantially full spectrum of visible light” meant, since it is contrary to the implementation of the conventional flow cytometer disclosed in the specification.

955. [REDACTED]
[REDACTED]
[REDACTED]
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[REDACTED]
[REDACTED]
[REDACTED]