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PROVISIONAL APPLICATION COVER SHEET

MAIL STOP
PROVISIONAL PATENT APPLICATION
P.O. BOX 1450
ALEXANDRIA VA 22313-1450

Re: DRY AND SEMIDRY ENRICHMENT FOR THE DETECTION OF FOODBORNE PATOGENS, by MANSOUR SAMADPOUR

The named inventor, **MANSOUR SAMADPOUR** has authorized the filing of this **PROVISIONAL PATENT APPLICATION** under 35 U.S.C. 111(b) for:

DRY AND SEMIDRY ENRICHMENT FOR THE DETECTION OF FOODBORNE PATOGENS.

MANSOUR SAMADPOUR has an address of Molecular Epidemiology, Inc.,8279 Lake City Way N.E.,,SEATTLE WA 98115 and is a citizen of THE UNITED STATES OF AMERICA.

A written specification containing the description of the invention to enable any person skilled in the art to make and use the invention and setting forth the best mode for carrying out the invention in compliance with 35 U.S.C. 112 together with any drawings when necessary for the understanding of the invention are attached hereto.

A filing fee of $ 160.00 is attached hereto.

LAW OFFICE OF JOSEPH CHALVERUS

Joseph Chalverus
Registered Patent Attorney 30,144
JC/dd.101
ENC: CK: G 5273
1 PAGE OF SPECIFICATION

Dry and semidry enrichment for the detection of foodborne pathogens

Rapid detection of foodborne pathogens has become an essential component of food manufacturing processes. The same applies to the detection of waterborne pathogens, and in general any kind of bacterial, viral, fungal, and parasitic pathogens that are capable of in-vivo multiplication. Most regulatory agencies and customers mandate specific testing for pathogens which are common to specific food types. May food manufacturers have had to built in-house labs to expedite the testing or lose valuable time waiting for test results when samples are shipped out to outside labs. Furthermore in many instances the cost of enrichment media can be substantial. Herein we describe a method that relies on dry enrichment or semi dry enrichment process, which would allow for incubation of the food samples without the addition of enrichment media, or with addition of small quantities of media and/or supplements. The samples will be incubated immediately at the desired incubation temperature, or they will incubate in-transit by shipping the samples in a temperature controlled shipping box that permits incubation at appropriate temperatures with ranges depending on the pathogen's optimal competitive growth range.

While with many types of foods, the food itself can be incubated with no addition of inhibitory or supplementary substances, with dry and semidry foods the water activity will be adjusted to allow for the growth of the target organism. Addition of supplements will depend on the target organism and the nature of the sample which is to be tested. The supplements include water, sugars, proteins, minerals, organics, vitamins and cofactors, antibiotics, dies, indicators, etc. With foods or environmental samples that are in liquid form, the samples can be enriched directly with or without a concentration step with or without the addition of supplementary nutrients, inhibitors, or indicators.
The protocols as described allows for the enrichment of pathogens, or target organisms with minimal increase in volume/weight of the samples, for samples that are to be shipped out, the shipping time can be used to enrich the sample without substantial increase in the weight and volume of the product which also minimizes the chance for spill and cross contamination. Additionally the fact that sample size has not increased substantially in terms of its volume /weight, the sensitivity of the method is increased due to the elimination of dilution factor.