



## Standard Plate Count Medium (without Membrane Filter)

MF001

For total bacterial detection and enumeration. It is recommended for cultivating microorganisms in water, waste water, milk, food, raw materials, beverages and other samples.

### Directions

The test sample should be filtered through a sterile membrane filter having pore size of  $0.22\mu / 0.45\mu$ . Rehydrate the nutrient pad with 2.0-2.5 ml sterile distilled / purified water. After filtration, remove the membrane filter aseptically using sterile forceps. Place the membrane filter on rehydrated nutrient pad. Incubate the inoculated nutrient. Interpret the results qualitatively by observing the presence or absence of growth and quantitatively by counting the number of colonies on the surface of the membrane filter and calculating CFU/ml.

### Principle And Interpretation

DriFilter Membrane Nutrient Pad Medium is ready to use sterile culture media in the form of a 50 mm biological inert absorbent pads impregnated with Plate Count medium, then dried and sterilized in 55 mm petri plate. They eliminate the need of laborious media preparation and autoclaving procedures. The nutrient pads are to be just rewetted with sterile distilled water and are ready to use. Use of nutrient pads allows larger sample volumes to be tested at a time. Interpretation of results is directly by counting the CFUs and also quantifies the microbial load present in the sample. Plate Count medium is formulated as described by Buchbinder et al (1) which is recommended by APHA (2,3,4) and FDA (5). Casein enzymic hydrolysate provides amino acids and other complex nitrogenous substances. Yeast extracts supplies Vitamin B complex. {APHA recommends the use of pour plate technique. The samples are diluted and appropriate dilutions are added in Petri plates. Sterile molten agar is added to these plates and plates are rotated gently to ensure uniform mixing of the sample with agar. The poured plate count method is preferred to the surface inoculation method, since it gives higher results. Plate Count Agar is also suitable for enumerating bacterial count of sterile rooms.}

### Quality Control

#### Appearance

Dry filter membrane pad of 50mm diameter

#### Colour

Pale coloured nutrient pad

#### Cultural response

Cultural characteristics observed after incubation at 35-37°C for 18-48

#### Sterility test

Passes release criteria

#### Cultural Response

Organism	Growth	Colour of colony
<b>Cultural response</b>		
<i>Escherichia coli</i> ATCC 25922	Luxuriant	Colourless
<i>Staphylococcus aureus</i> ATCC 25923	Luxuriant	Colourless
<i>Enterococcus faecalis</i> ATCC 29212	Luxuriant	Colourless

### Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

## Reference

1. Buchbinder L., Baris Y., Aldd E., Reynolds E., Dilon E., Pessin V., Pincas L. and Strauss A., 1951, Publ. Hlth. Rep., 66:327.
2. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
3. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
4. Eaton A. D., Clesceri L. S. and Greenberg A. E., Rice E. W.,(Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st Ed., APHA, Washington, D.C.
5. FDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, DC.

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