

Technical Information

M-PC Broth

Product Code: DM 2610

Application: - M-PC Broth is recommended for enumerating microorganisms by membrane filtration.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	10.000
Yeast extract	5.000
Dextrose	2.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

M-PC Broth used for enumerating microorganisms by membrane filtration has composition similar to Plate Count Agar (DM1091), except agar. Also M-PC Broth has the media ingredients in double concentrations, than the agar medium (1). This medium can therefore be used as a general purpose non-selective medium to determine total bacterial counts from food and water sample by the membrane filtration procedure.

Bacteria can be removed from liquids by passing them through filters with very small pores that trap bacteria, but in general, not *Mycoplasmas* or viruses (1). The membrane filter technique is highly reproducible, can be used to test relatively large sample volumes, and usually yields numerical results more rapidly. This technique is extremely useful in monitoring drinking water and a variety of natural waters (2).

Casein enzyme hydrolysate supply carbon and nitrogen source. Yeast extract acts as a source of trace elements, vitamin B complex nutrients and essential amino acids. Dextrose acts as the carbon source.

Methodology

Suspend 17 grams of dehydrated powder media in 1000 ml distilled water. Mix thoroughly & heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Shake well before dispense as desired.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity

Light yellow coloured clear solution without any precipitate.

Reaction

Reaction of 1.7% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH Range

6.80-7.20

Cultural Response

DM2610: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.



Dehydrated Culture Media
Bases / Media Supplements

Organism	Inoculum (CFU)	Growth
<i>Escherichia coli</i> ATCC 25922	50-100	good
<i>Enterococcus faecalis</i> ATCC 19433	50-100	good
<i>Staphylococcus epidermidis</i> ATCC 12228	50-100	good
<i>Staphylococcus aureus</i> ATCC 25923	50-100	good

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Eaton A. D., Clesceri L. S. and Greenberg A. W., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st Ed., APHA, Washington, D.C.
2. Collins C. H., Lyne P. M., Grange J. M., 1995, Collins and Lyne Microbiological Methods, 7th Ed., Butterworth Heinemann.

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