M-(HPC) Heterotrophic Plate Count Agar Base

M1123

M-(HPC) Heterotrophic Plate Count Agar Base is recommended for the enumeration of heterotrophic microorganisms from water samples using membrane filter technique.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	20.000
Gelatin	25.000
Agar	15.000
Final pH (at 25°C)	7.1±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 60.0 grams in 1000 ml distilled water containing 10 ml glyceorl. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 5 minutes. Mix well and dispense as desired.

Principle And Interpretation

Heterotrophs are organisms including bacteria, yeasts and moulds that require an external source of organic carbon for growth. The heterotrophic plate count (HPC), formerly known as the standard plate count, is a procedure for estimating the number of live heterotrophic bacteria in water and measuring changes during water treatment and distribution or in swimming pools. Heterotrophic Plate Count Method has been applied in many variants and is widely used to measure the heterotrophic microorganism population in drinking water and other media. M-(HPC) Heterotrophic Plate Count Agar Base with added glycerol is recommended for the detection of heterotrophic organisms of potable water, swimming pool and other waters (1, 2). Three different methods are described for determining the heterotrophic plate count i.e. pour plate method, spread plate method and membrane filter method. M-(HPC) Heterotrophic Plate Count Agar Base is employed for use in the membrane filtration technique. M-(HPC) Heterotrophic Plate Count Broth Base can also be employed for the determination of Heterotrophic Plate Count by the membrane filter method. Sterile cotton absorbent pads are saturated with the broth medium. Membrane filters are then placed on these saturated cotton absorbent pads or agar surface and incubated.

Peptic digest of animal tissue is the source of nutrients for organisms, which are not highly fastidious. Gelatin is utilized by microorganisms through a proteolytic mechanism. The addition of glycerol to the basal medium provides a source of carbon and energy.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel and 2.5% Gelatin gel

Colour and Clarity of prepared medium
Light yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 6.0% w/v aqueous solution at 25°C. pH : 7.1±0.2

pH
6.90-7.30

Cultural Response
M1123: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth

Escherichia coli ATCC 25922	50-100	luxuriant
Enterococcus faecalis ATCC 29212	50-100	luxuriant
Pseudomonas aeruginosa ATCC 27853	50-100	luxuriant

Storage and Shelf Life

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

Reference

1. Taylor R. H. and Geldreich E. E., 1979, J. Am. Water works Assoc. 71:402 .
2. 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.

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