Heterotrophic Plate Count Agar

Intended Use
Heterotrophic Plate Count Agar is used for heterotrophic plate count of bacteria in water.

Summary
Heterotrophs are organisms including bacteria, yeasts and moulds that require an external source of organic carbon for growth. Heterotrophic Plate Count Method has been applied in many variants and is widely used to measure the heterotrophic microorganism population in drinking water systems (potable water), swimming pool and other waters. Three different methods are described for determining the heterotrophic plate count i.e. pour plate method, spread plate method and membrane filter method. The concentration of heterotrophic bacteria in the distribution system can be influenced by the bacteriological quality of the finished water entering the system, as well as water temperature, residence time, levels of disinfectant residual, pipe materials, surface area-to-volume ratio, flow conditions, and the availability of nutrients for growth.

Principle
Peptone and soluble Casein are the source of nutrients for organisms, which are not highly fastidious. Dipotassium hydrogen phosphate buffers the medium. Magnesium sulphate and ferric chloride are sources of inorganic ions.

Formula*

Ingredients	**g/L**
Peptone	3.0
Soluble Casein	0.5
Dipotassium Hydrogen Phosphate	0.2
Magnesium Sulphate	0.05
Ferric Chloride	0.001
Agar	15.0
Final pH (at 25°C)	7.2 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of specimen
Water samples.

Specimen Collection and Handling
Ensure that all samples are properly labelled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 18.75 g of the powder in 1000 mL purified / distilled water.
2. Heat to boiling to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. Mix well and pour into sterile petridishes.

Quality Control
Dehydrated Appearance: Cream to yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Off-white to light yellow coloured, clear to slightly opalescent gel, forms in petridishes.
Cultural Response: Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 48 hours.

Organism (ATCC)	Growth
Escherichia coli (25922)	Good
Staphylococcus aureus subsp. *aureus* (25923)	Good
Enterococcus faecalis (29212)	Good
Bacillus spizizenii (6633)	Good
Pseudomonas aeruginosa Strain Boston 41501 (27853)	Good
Proteus mirabilis (25933)	Good
Aeromonas hydrophila (7966)	Good
Klebsiella pneumoniae (13883)	Good
Citrobacter freundi (8090)	Good
Acinetobacter calcoaceticus (23055)	Good

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

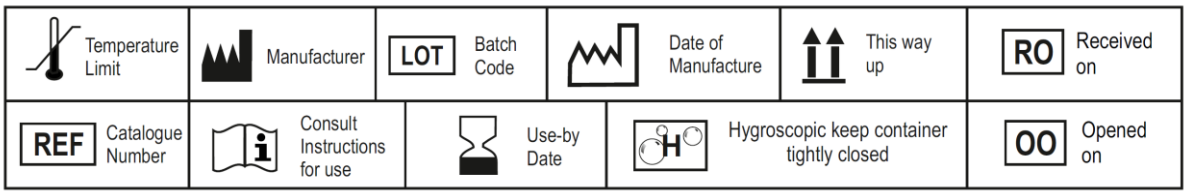
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

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.
3. Reasoner, 1990; Prévost et al., 1997; Payment, 1999; Carter et al., 2000; Clement et al., 2004.
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201080060500	Dehydrated Culture Media	500 g



Revision: 0825/VER-03

Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.