



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

High Plate Count Agar

Product Code: DM 2097

Application: - High Plate Count Agar is used for obtaining higher colony counts by spread plate or pour plate or membrane filter technique.

Composition**

| Ingredients | Gms / Litre |
|--------------------------------|-------------|
| Peptic digest of animal tissue | 3.000 |
| Casein soluble | 0.500 |
| Dipotassium phosphate | 0.200 |
| Magnesium sulphate | 0.050 |
| Iron (III) Chloride | 0.001 |
| Agar | 15.000 |
| Final pH (at 25°C) | 7.2±0.2 |

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

The heterotrophic plate count (HPC), formerly known as the standard plate count is a method for counting the numbers of live heterotrophic bacteria in water and measuring the changes during water treatment and distribution or in swimming pools. Different methods namely pour plate method, spread plate method and membrane filter method can be used to obtain heterotrophic plate count. High Plate Count Agar is recommended by APHA for determining heterotrophic plate count ⁽¹⁾. This low nutrient medium is likely to produce higher colony counts than high nutrient media. Peptic digest of animal tissue and casein provide the necessary nitrogenous compounds for the growth of heterotrophic microorganisms. Metallic salts and dipotassium phosphate together with casein and peptic digest of animal tissue promotes the growth of higher number of microorganisms. Refer appropriate references for standard procedures ⁽¹⁾.

Methodology

Suspend 18.75 grams of powder media in 1000 ml distilled water. Shake well and heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (12 1°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light yellow coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 1.88% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH Range 7.00-7.40

Cultural Response/Characteristics

DM2097: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.





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| Cultural Response | Inoculum (CFU) | Growth | Recovery |
|--|----------------|-----------|----------|
| <i>Bacillus subtilis</i> ATCC 6633 | 50-100 | luxuriant | >=70% |
| <i>Enterococcus faecalis</i> ATCC 29212 | 50-100 | Luxuriant | >=70% |
| <i>Escherichia coli</i> ATCC 25922 | 50-100 | luxuriant | >=70% |
| <i>Lactobacillus casei</i> ATCC 9595 | 50-100 | luxuriant | >=70% |
| <i>Staphylococcus aureus</i> ATCC 25923 | 50-100 | luxuriant | >=70% |
| <i>Streptococcus pyogenes</i> ATCC 19615 | 50-100 | luxuriant | >=70% |

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8⁰ in sealable plastic bags for 2-5 days.

Further Reading

1. Eaton A. D., Clesceri L. S., Rice E. W. and Greenberg A. W., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st Ed., APHA, Washington, D.C

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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