

Technical Information

Plate Count Agar (Standard Methods Agar)

Product Code: DM 1091

Application: Plate Count Agar is recommended for the determination of plate counts of microorganisms in food, water and waste water.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	5.000
Yeast extract	2.500
Dextrose	1.000
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Plate Count Agar is formulated as described by Buchbinder et al ⁽¹⁾ This is recommended by APHA ⁽²⁻⁴⁾ and FDA ⁽⁵⁾.

Casein enzymic hydrolysate provides amino acids and other complex nitrogenous substances. Yeast extract supplies Vitamin B complex. APHA recommends the use of pour plate technique as described below. 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.

Methodology

Suspend 23.5 grams of powder media in 1000 ml distilled water. Shake well & heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°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 2.35% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH range 6.80-7.20

Cultural Response/Characteristics

DM 1091: Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 48 hours.

Organism	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%



Dehydrated Culture Media
Bases / Media Supplements

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. 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.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conforms solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.
- Do not use the products if it fails to meet specificatons for identity and performens parameters.

