



Ready Prepared Media

Technical Information

Plate Count Agar Plate

Product Code: PM 1091

Application: For determination of plate counts of microorganisms in foods, 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) which is recommended by APHA (2, 3, 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. 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.

Type of specimen

Food and dairy samples; Water samples, Environmental monitoring

Specimen Collection and Handling

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (6,7).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards(1). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the pack. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets

Limitations

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium .
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3. It is recommended to store the plates at 24-30°C to avoid minimum condensation.



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Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature .

Methodology

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate

Quality Control

Appearance

Sterile Plate Count Agar in 90mm disposable plates.

Colour of medium

Light yellow coloured medium

Quantity of medium

25 ml of medium in disposable plates

pH

6.80-7.20

Cultural response

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

Sterility Test

Passes release criteria

Organism

Escherichia coli ATCC25922

Staphylococcus aureus ATCC 25923

Enterococcus faecalis ATCC29212

Streptococcus pyogenes ATCC 19615

Lactobacillus casei ATCC9595

Bacillus subtilis ATCC 6633

Growth

Luxuriant

Luxuriant

Luxuriant

Luxuriant

Luxuriant

Luxuriant

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

On receipt store between 15-25°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,4).

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.



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Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform 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
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- Do not use the products if it fails to meet specificatons for identity and performens parameters.