Lecithin Agar

M1325

Intended Use:

Recommended for detection of bacterial contamination of surfaces in unprotected and protected areas.

Composition**

Ingredients	Gms / Litre
Tryptone	15.000
Soya peptone	5.000
Sodium chloride	5.000
Lecithin	0.700
Polysorbate 80 (Tween 80)	5.000
Sodium thiosulphate	1.000
L-Histidine	1.000
Agar	20.500
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 53.2 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour in sterile Petri plates.

Principle And Interpretation

This medium was originally recommended by APHA for use in microbial testing of water (1). Lecithin and polysorbate 80 were added to this medium by Weber and Black as a result of their research of the relative efficiencies of inhibitors for quaternary ammonium compounds (5). This medium is recommended for screening cosmetic products for microbial contamination. In this medium, soya peptone and tryptone provide nitrogenous compounds, carbon, sulphur and trace ingredients. Lecithin neutralizes quaternary ammonium compounds and polysorbate 80 is added to nullify phenolic compounds, hexachlorophene, formalin and alongwith lecithin neutralizes ethyl alcohol (2). Histidine acts as a reducing agent, Sodium thiosulphate neutralizes mercurial, halogens, aldehydes etc.

Type of specimen

Water samples

Specimen Collection and Handling

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

Warning and Precautions

Read the label before opening the container. 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. Biochemical characterization is necessary to be performed on colonies from pure cultures for further identification.
2. This medium is general purpose medium and may not support the growth of fastidious organisms.

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.

Quality Control

Appearance

Cream to yellow coloured homogeneous free flowing powder

Gelling
Firm, comparable with 2.05% Agar gel.

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

Reaction
Reaction of 5.32% w/v auqeous solution at 25°C. pH : 7.3±0.2

pH
7.10-7.50

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

Organism	Inoculum (CFU)	Growth
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	50-100	luxuriant

Key : (*) Corresponding WDCM numbers

Storage and Shelf Life

Store dehydrated and the prepared medium at 2-8°C. Use before expiry date on thelabel. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. APHA, 1960, Standard Methods for the Examination of Water and Wastewater, 11th ed., American Public Health Association, New York.
2. Favero (Chm.), 1967, A State of the Art Report, Biological Contamination Control Committee, American Association for Contamination Control.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition
4. Jorgensen, J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. Weber and Black, 1948, Soap Sanitary Chem., 24:134.

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