AC Agar

M337

AC Agar is recommended for cultivation of wide variety of microorganisms particularly for sterility testing.

Composition**

Ingredients	Gms / Litre
Proteose peptone	20.000
Beef extract	3.000
Yeast extract	3.000
Malt extract	3.000
Dextrose	5.000
Ascorbic acid	0.200
Agar	1.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 35.2 grams in 1000 ml of distilled water. Heat to boiling to dissolve the medium completely. Distribute in tubes or bottles to give the desired depth and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

If the medium is not used on same day, it is advisable to drive off dissolved gases by boiling or steaming in the autoclave and cool without agitation.

Principle And Interpretation

AC Medium support an early and luxuriant growth of aerobic, anaerobic and microaerophilic microorganisms. Many pathogenic and saprophytic aerobes can also be isolated and cultivated using AC Medium (1). This medium can also be used for sterility testing of solutions and biological products not containing mercurial preservatives. AC Agar does not exhibit the toxicity shown by some media containing sodium thioglycollate for some organisms as reported by Christensen (2) and Malin and Finn (3). Earlier studies performed have reported the usefulness of using this medium for the cultivation of a wide variety of organisms (4, 5). Kolb and Schneither (6) used AC Agar to test the viability of *Bacillus anthracis* after exposure to methyl bromide to test the efficiency of methyl bromide as a germicidal and sporicidal agent.

Proteose peptone, beef extract, yeast extract and malt extract serve as the carbon and nitrogen sources in addition to being a source of vitamins and cofactors. Dextrose serves as the fermentable carbohydrate source of energy. Ascorbic acid in the media helps to improve the clarity of the medium.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Semisolid, comparable with 0.1 % Agar gel.

Colour and Clarity of prepared medium
Medium amber coloured clear to slightly opalescent solution

Reaction
Reaction of 3.52% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH
7.00-7.40

Cultural Response
M337: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours (Clostridium species incubated anaerobically).

Organism	Inoculum (CFU)	Growth
Cultural Response		
Clostridium perfringens ATCC 12919	50-100	luxuriant
Escherichia coli ATCC 25922	50-100	luxuriant
Neisseria meningitidis ATCC 13090	50-100	luxuriant
Staphylococcus aureus ATCC 25923	50-100	luxuriant
Streptococcus mitis ATCC 9811	50-100	luxuriant
Streptococcus pneumoniae ATCC 6303	50-100	luxuriant

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on label.

Reference

1. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I. Williams & Wilkins, Baltimore, Md.
2. Christensen, 1944, Paper read at New York Meeting, American Public Health Association.
3. Malin and Finn, 1951, J. Bacteriol., 62:349.
4. Reed and Orr, 1943, J. Bacteriol., 45:309.
5. Schneiter, Dunn and Caminita, 1945, Public Health Rep., 60:789.
6. Kolb and Schneiter, 1950, J. Bacteriol., 59:401.

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