Technical Information

A C Broth

Product Code: DM 1875

Application: - A C Broth is recommended for cultivation of common aerobes and sterility testing of solutions and biological products without containig mercurial preservatives

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
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

AC Broth support an early and luxuriant growth of aerobic, anaerobic and microaerophilic microorganisms . Many pathogenic and saprophytic aerobes can also be grown using AC Broth [1,4,5] This medium can also be used for sterility testing of solutions and biological products not containing mercurial preservatives. Some of the media containing sodium thioglycollate exhibit toxicity for some organisms. This toxicity is not seen in the case of AC Broth as reported by Christensen [2] and Malin and Finn [3]. 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 and source of energy. Ascorbic acid helps to improve the clarity of the medium.

Methodology

Suspend 34.2 grams of powder media in 1000 ml of distilled water. Shake well and heat if necessary to dissolve the medium completely. Distribute in tubes or bottles to give the desired depth and sterilize by autoclaving at 15 lbs pressure (12 1°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 before use.

Quality Control

Physical Appearance
Cream to yellow homogeneous free flowing powder
Colour and Clarity of prepared medium
Medium amber coloured clear to slightly opalescent solution
Reaction
Reaction of 3.42% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH Range:- 7.00-7.40

Cultural Response/Characteristics
DM 1875: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours (! Clostridium species incubated anaerobically).

Organism	Inoculum (CFU)	Growth
Clostridium perfringens ATCC 12919	50-100	luxuriant
Escherichia coli ATCC25922	50-100	Luxuriant
Neisseria meningitides ATCC 13090	50-100	Luxuriant
Staphylococcus aureus ATCC 25923	50-100	Luxuriant
Streptococcus mitis ATCC9811	50-100	Luxuriant
Streptococcus pneumoniae ATCC 6303	50-100	Luxuriant

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: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

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.

Disclaimer :