Spectrum For Diagnostic Industries

Brain Heart Infusion Agar

REF.	Pack size
603 01 100	100 gm
603 01 500	500 gm

Intended Use

Brain-Heart Infusion Agar is used for the cultivation of streptococci,Neisseria and other fastidious organisms isolated from throat,ear swab,sterile urine and CSF specimens.

Background

Rosenow prepared a rich medium for culturing streptococci by combining dextrose broth and brain tissue. Hayden modified the original formula while working with dental pathogens.
The current formula is a modification of Rosenow and Hayden, using dehydrated infusions of calf brain and beef heart tissue. Brain heart infusion agar can be used as a general medium for aerobic bacteriology and for the primary recovery of fungi from clincial specimens. it is also used for the cultivating and maintenance of pure cultures.

Principle

Peptone and infusion from calf brain and beef heart provide sources of nitrogen, carbon, sulphur and other growth factors.Dextrose is the fermentable carbohydrate and disodium phoshphate is the buffer
.Sodium chloride maintains the osmotic balance. Addition of defbrinated sheep blood provides additional essential growth factors for more fastidious organisms.

Components	gm/Litre
Calf brain	7.7
protease peptone	10
Beef Heart	9.8
Dextrose	2
Sodium chloride	5.0
Agar	15.0
Disodium phosphate	2.5

Final pH (at 25°C) 7.4 ± 0.2

Preparation, Storage and Stability

Store the dehydrated medium at 10-30°C and use before the expiry date on the label.Store the prepared medium at 2-8°C

Procedure

1. Suspend 52 g of the powder in 1 L distilled water and mix well.

2. Heat with frequent agitation and boil for one minute to dissolve the powder completely.

3. Sterilize by autoclaving at 121°C for 15 minutes.

4. 4- Mix well and pour into sterile petri plates.

Quality Control Appearance

1- Dehydrated Appearance : light yellow to beige coloured, homogeneous, free flowing powder.

2- Prepared Appearance : trace to slightly hazy, and light to medium amber.

3- Cultural Response : after 18-24 hours at 30-35°C or 35± 2°C for clinical specimens

Organisms (ATCC)	Growth
Aspergillus brasiliensis	Good
Streptococcs pneumoniae	Good
Streptococcus pyogenes	Good
Staphylococcus aureus	Good
Escherichia coli	Good

Interpretation of the results

1- After proper incubation , the plates should show isolated colonies in streaked areas and confluent growth in areas of heavy inoculation.

2- In cultures for fungi, examine plates for fungal colonies exhibiting typical color and morphology

3- All cultures should be weekly examined for fungal growth and held for 4-6 weeks before being reported as negative.

Precautions

1- Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

2- Organsims as H.capsulatum and other pathogenic fungi can produce free infective sprores , so extreme care must be taken to avoid dissemination of infective particles while culturing.

Bibliography

1. Hayden, R. L. 1923. Elective localization in the eye of bacteria from infected teeth. Arch. Int. Med. 32:828-849.

2. Atlas, R. M. 1993. Handbook of microbiological media, p. 147-153, CRC Press, Boca Raton, FL

3. Cunnif, P. (ed.). 1995. Official Methods of Analysis AOAC International, 16th ed. AOAC International, Gaithersburg, MD

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