HiEncap™ Brain Heart Infusion Agar

EC211CCL

HiEncap™ Special Infusion Agar

HiEncap™ Brain Heart Infusion Agar is recommended for the cultivation of fastidious pathogenic bacteria, yeasts and moulds.

Composition**

Ingredients	Gms / Litre
Calf brain, infusion from	200.000
Beef heart, infusion from	250.000
Proteose peptone	10.000
Dextrose	2.000
Sodium chloride	5.000
Disodium phosphate	2.500
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Each capsule contains 13 grams of media. Suspend 1 capsule in 250 ml (4 capsules in 1000 ml) distilled or purified water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well before pouring. If desired, 20 units Penicillin and 40 µg Streptomycin per ml of medium may be added to make the medium selective for fungi.

Principle And Interpretation

Brain Heart Infusion Agar is highly nutritious and can support luxuriant growth of wide variety of microorganisms. It can be further enriched by the addition of blood or rendered selective by adding different antibiotics (1, 2). It is a general purpose medium used for primary isolation of aerobic bacteria from clinical specimens. Addition of 50 mg/l chloramphenicol or 40mg/l streptomycin or a mixture of 50mg/l gentamicin and 50mg/l chloramphenicol along with 5-10% sterile defibrinated blood is often recommended for inhibition of bacteria and isolation of pathogenic systemic fungi.

A mixture of cycloheximide (0.5 g/l) and chloramphenicol (0.05 g/l) is also used for selective isolation of pathogenic fungi (incubation at 25-30°C for 1-2 weeks) (3). Some fungi may be inhibited on this medium with 10% sheep blood, gentamicin and chloramphenicol (4-6).

Proteose peptone and infusions used in the media serves as sources of carbon, nitrogen, vitamins, amino acids, along with essential growth factors. Dextrose is the energy source. Sodium chloride maintains the osmotic equilibrium of the medium while disodium phosphate buffers the medium. Defibrinated sheep blood added to the basal medium provides essential growth factors for the more fastidious fungal organisms.

Quality Control

Appearance
Gelatin capsule containing cream to yellow coloured granular media

Gelling
Firm,comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Basal medium : Light amber coloured clear to slightly opalescent gel. After addition of 5% v/v sterile defibrinated blood : Cherry red coloured, opaque gel forms in Petri plates.

Quantity
Each capsule contains 13 grams of medium for 250 ml media

Reaction
Reaction of 5.2% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH
7.20-7.60

Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours(If desired add 5% v/v sterile defibrinated blood).

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Growth w/ blood	Recovery w/ blood
Cultural Response					
Candida albicans ATCC 26790	50-100	luxuriant	>=70%	luxuriant	>=70%
Escherichia coli ATCC 25922	50-100	luxuriant	>=70%	luxuriant	>=70%
Shigella flexneri ATCC 12022	50-100	luxuriant	>=70%	luxuriant	>=70%
Staphylococcus aureus ATCC 25923	50-100	luxuriant	>=70%	luxuriant	>=70%
Streptococcus pneumoniae ATCC 6303	50-100	luxuriant	>=70%	luxuriant	>=70%

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 the label.

Reference
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3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
4. Creitz and Puckett, 1954, Am. J. Clin. Pathol., 24:1318.
5. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
6. Ajello L., Georg L., Kaplan W. and Kaufman L., 1963, CDC Laboratory Manual for Medical Mycology, PHS Publication No. 994, U.S. Govt. Office, Washington, D.C.

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