Brain Heart Infusion Agar

Catalog : HB8478-7-250

Brain Heart Infusion (BHI) Agar is a general-purpose medium suitable for the cultivation of a wide variety of organism types, including bacteria, yeasts and molds. With the addition of 5%or 10% sheep blood, it is used for the isolation and cultivation of a wide variety of fungal species, including systemic fungi, from clinical and nonclinical sources.

Approximate Formula:

Ingredients	gm/liter
Peptic Digest of Animal Tissue	5.0
Calf Brain,Infusion	4.0
Beef Heart,Infusion	4.0
Pancreatic Digest of Casein	16.0
Sodium chloride	5.0
Dextrose	2.0
Disodium Hydrogen Phosphate	2.5
Agar	13.5

Final pH 7.4±0.2 at 25 ℃

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 52.0g of the medium in one liter of deionized or distilled water. Mix well and heat with frequent agitation. Boil for 1 minute. Sterilize in an autoclave at 121℃(15 lbs.) for 15 minutes.

Principle and Interpretation:

BHI Agar has proven to be effective in the cultivation of a wide variety of microorganisms, including many types of pathogens. BHI Agar can be used as a general medium for aerobic bacteriology and for the primary recovery of fungi from clinical specimens. Brain Heart Infusion Agar with 10% Sheep Blood can be used to isolate systemic fungi that may grow poorly on the nonenriched medium. Antimicrobial agents, including chloramphenicol, gentamicin, and penicillin in combination with streptomycin, can be incorporated to improve the recovery of pathogenic fungi from specimens heavily contaminated with bacteria

Brain Heart, Infusion from (Solids), peptic digest of animal tissue and pancreatic digest of casein the necessary nitrogen compounds, carbon, vitamins and also some trace ingredients, which are necessary for the growth of bacteria. Sodium chloride maintains the osmotic equilibrium of the medium. Dextrose provides an energy source. High dextrose concentration and low pH favors fungal growth and inhibits contaminating bacteria from test samples. Disodium Hydrogen Phosphate maintains the potential difference and the osmotic pressure; but also plays an important role as a pH buffer.

Appearance:

Dehydrated medium is a free-flowing yellowish powder. The prepared medium is a kind of yellowish transparent gel.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

Brain Heart Infusion (BHI) Agar must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 36±1℃ for 18-24 hours.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Recovery	Remarks
Escherichia coli	ATCC 25922	10-100	luxuriant	≥70%	Colorless transparent small colonies
Listeria monocytogenes	ATCC 19114	10-100	luxuriant	≥70%	White small colonies
Staphylococcus aureus	ATCC 25923	10-100	luxuriant	≥70%	Colorless large colonies
Streptococcus pyogenes	ATCC 19615	10-100	luxuriant	≥70%	White small colonies
Enterococcus faecalis	ATCC 29212	10-100	luxuriant	≥70%	Colorless small colonies

References:

1. Roseburg T. et al, 1944, J. Infect. Dis., 74:131.
2. Conant N. F., 1950, Diagnostic Procedures and Reagents, 3rd Ed., APHA Inc.
3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.

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