ARENA BioScien

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Brain Heart Infusion (BHI) Agar

Designed for cultivation of fastidious pathogenic bacteria, yeasts and moulds from clinical and non clinical samples.

REF: BS.1/NZ01.100.0100	100 Gram	REF: BS.1/NZ01.250.0250	250 Gram
REF: BS.1/NZ01.500.0500	500 Gram		

PRINCIPLE AND INTERPERTATION :

Brain Heart Infusion Agar is a highly nutritious medium capable of supporting the luxuriant growth of a wide range of microorganisms. It may be enriched further by the addition of blood or rendered selective through the incorporation of various antibiotics (1,2). The medium is commonly employed as a general-purpose culture medium for the primary isolation of aerobic bacteria from clinical specimens.
For the selective isolation of pathogenic systemic fungi, supplementation with 5–10% sterile defibrinated blood together with either chloramphenicol (50 mg/L), streptomycin (40 mg/L), or a combination of gentamicin (50 mg/L) and chloramphenicol (50 mg/L) is frequently recommended to suppress bacterial contaminants. A combination of cycloheximide (0.5 g/L) and chloramphenicol (0.05 g/L) may also be incorporated for the selective recovery of pathogenic fungi, with incubation carried out at 25–30°C for 1–2 weeks (3). However, certain fungal species may exhibit inhibited growth on media containing 10% sheep blood, gentamicin, and chloramphenicol (4,5,6).
The nutritive properties of the medium are provided by proteose peptone and tissue infusions, which supply carbon, nitrogen, amino acids, vitamins, and essential growth factors. Dextrose serves as the primary energy source, while sodium chloride maintains osmotic balance. Disodium phosphate acts as a buffering agent, helping to stabilize the pH of the medium. When added, defibrinated sheep blood supplies additional growth factors required by fastidious fungal organisms.

MEDIA COMPOSITION

Item	Formula per liter of medium
Glucose (Dextrose)	2.00 gm
Sodium chloride	5.00 gm
Disodium hydrogen phosphate	2.5 gm
BHI powder	5.00 gm
Peptone	10.0
HM infusion powder #	12.5
Agar	15

Equivalent to Dehydrated calf brain infusion

Final pH 7.4 ± 0.2
** Formula adjusted, standardized to suit performance parameters.

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:
- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.
  S56: dispose of this material and its container at hazardous or special waste collection point.
  S57: use appropriate container to avoid environmental contamination.
  S61: avoid release in environment.

For further information, refer to the Brain Heart Infusion Agar material safety data sheet.

STORAGE AND STABILITY

BioScien **BHI agar** Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use Product performance is best if used within stated expiry period.

PREPARATION

Suspend 52.0 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates. If desired, 20 units Penicillin and 40 µg Streptomycin per ml of medium may be added to make the medium selective for fungi.

Deterioration

The color of ***BioScien*** **BHI agar** is Cream to yellow homogeneous free flowing powder. 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.

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile petri dishes
- Incubator
- Autoclave

PERFORMANCE CHARACTERISTICS

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

Organism	Growth
Shigella flexneri ATCC 12022	Luxuriant
Streptococcus pneumoniae ATCC 6303	Luxuriant
Staphylococcus aureus ATCC 25923	Luxuriant
Escherichia coli ATCC 25922	Luxuriant
Candida albicans ATCC 26790	Luxuriant

SYMBOLS IN PRODUCT LABELLING

IVD	For in-vitro diagnostic use	Σ	Number of <n> test in the pack
LOT	Batch Code/Lot number		Caution
REF	Catalogue Number		Do not use if package is damaged
	Temperature Limitation		Consult Instruction for use
	Expiration Date		
	Manufactured by		

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control still out of range please contact ***BioScien*** technical support.

REFERENCE

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7. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
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