ARENA BioScien

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Brain Heart Infusion (BHI) Broth

Designed for propagation of pathogenic cocci and other fastidious organisms associated with blood culture work and allied pathological investigations and for enrichment of staphylococus aureus.

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 (BHI) Broth was originally developed by Rosenow (1) through the addition of brain tissue to dextrose broth. BHI Broth is a highly nutritious and well-buffered medium that supports the growth of a wide range of microorganisms (2–4). Owing to its rich nutrient content, it is suitable for the cultivation of both fastidious and non-fastidious organisms. More recently, this medium has been recommended by the ISO committee for the detection of Staphylococcus aureus (5,6,7). By incorporating appropriate supplements and selective agents, BHI Broth can be adapted for the cultivation of various bacterial species. In addition, the medium is widely used for the preparation of standardized inocula for antimicrobial susceptibility testing.

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, solids #	12.5

* Equivalent to Dehydrated beef heart infusion
# Equivalent to Dehydrated calf brain infusion

Final pH 7.3 ± 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 theBrain Heart Infusion (BHI) Broth material safety data sheet.

STORAGE AND STABILITY

BioScien **BHI Broth** 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 37.0 gram in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense into bottles or tubes as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. For best results, the medium should be used on the day it is prepared, otherwise, it should be boiled or steamed for a few minutes and then cooled before use.

Deterioration

The color of ***BioScien*** **BHI Broth** is Cream to yellow homogeneous free flowing powder. Prepared medium Light amber coloured, clear to slightly opalescent solution

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.

Organism	Growth
Staphylococcus aureus ATCC 25923	Luxuriant

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

1.Rosenow, 1919, J. Dental Res., 1:205.
2.Conant N.F., 1950, Diagnostic Procedures and Reagents, 3rd Ed., APHA, Inc., New York, p. 452.
3.MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
4.Roseburg T. et al, 1944, J. Inf. Dis., 74:131.
5.Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase positive Staphylococci (Staphylococcus aureus and other species). International Organization for Standardization (ISO), 1999 Ammd 2:2018-07, Draft ISO/DIS 6888-1.
6.Microbiology of food, animal feeding stuffs and water- Preparation, production, storage and performance culture media, EN ISO 11133:2014 /Amd.2 :2020 (E).
7.Milk and milk-based products - Detection of thermonuclease produced by coagulase-positve Staphylococci. International Organization for Standardization (ISO), 8870 / IDF 83-2006.
8.Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
9.Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
10.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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		