

BRAIN HEART INFUSION BROTH

Brain Heart Infusion (BHI) Broth is a general-purpose medical laboratory liquid medium used for enrichment of pathogenic cocci; *Staphylococcus aureus* from food, animal feeding stuffs, milk and milk products.

REF: BS.1/BB01.100.0100	100 Gram	REF: BS.1/BB01.250.01250	250 Gram
REF: BS.1/BB01.500.0500	500 Gram		

CLINICAL SIGNIFICANCE ⁽¹⁾

BHI Broth is a highly nutritious medium and is also well buffered to support the growth of wide variety of microorganisms (2,3,4). Recently this medium has been recommended by ISO committee for the detection of *Staphylococcus aureus* (5,6). The With the additions of desired additives this medium can be specifically adopted for cultivation of various bacteria. BHI Broth is also used for the preparation of inocula for use in antimicrobial susceptibility tests.

METHOD PRINCIPLE ⁽²⁻³⁾

Brain Heart Infusion Broth contain peptones and glucose which form the nutritional sources within the media. Sodium chloride maintains the osmotic equilibrium of the media whilst disodium phosphate is added to maintain the pH level. The formulation for Heart Infusion devices has been developed to give equivalent performance to Brain Heart Infusion devices, whilst carrying a lower regulatory burden as a result of the exclusion of brain products.

MEDIA COMPOSITION

Item	Concentration %
-Calf Brains infusion	33.78
-Beef heart infusion	13.51
-Peptone	27.02
-Dextrose	5.4
-Sodium Chloride	13.51
-Disodium Phosphate	6.75

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 BHI broth material safety data sheet.

MEDIA PREPARATION, STORAGE AND STABILITY ⁽²⁾

BioScien BHI broth dehydrated media are stable until expiration date stated on label when properly stored 10-30°C. Hydrated BHI

broth media is prepared by suspend 37 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Dispense into bottles or tubes as desired. Sterilize in autoclave at 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

Formula in g/L

Calf Brains infusion	: 12.5 g/L
Beef heart infusion	: 5.0 g/L
Peptone	: 10.0 g/L
Dextrose	: 2.0 g/L
Sodium Chloride	: 5.0 g/L
Disodium Phosphate	: 2.5 g/L

Final pH 7.4 ± 0.2 at 25°C

Deterioration

The color of **BioScien** BHI broth medium is cream to yellow homogeneous free flowing powder, dehydrated medium is Light amber coloured, clear to slightly opalescent solution. If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

SPECIMEN COLLECTION AND PRESERVATION ^(4,5)

Food samples and animal feeding stuffs; Dairy samples

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile cups
- Sterile bottles or tubes
- Incubator
- Autoclave

CHARACTERISTICS OF THE COLONIES ⁽¹⁾

Test Organisms	Growth
<i>Staphylococcus aureus subsp. aureus</i> ATCC 25923 (00034*)	luxuriant
<i>Staphylococcus aureus subsp. aureus</i> ATCC 6538 (00032*)	luxuriant
<i>Streptococcus epidermidis</i> ATCC 14990 (00132*)	luxuriant
<i>Streptococcus epidermidis</i> ATCC 12228 (00036*)	luxuriant

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact **BioScien** technical support.











BHI Broth	Inoculum (CFU)	Expected results
<i>Staphylococcus aureus subsp. aureus</i> ATCC 6538 (00032*)	50-100	luxuriant
<i>Streptococcus epidermidis</i> ATCC 12228 (00036*)	50-100	luxuriant

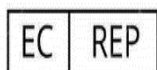
PERFORMANCE CHARACTERISTICS ⁽⁴⁾

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

REFERENCES

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. Milk and milk-based products - Detection of thermonuclease produced by coagulase-positive Staphylococci. International Organization for Standardization (ISO), 8870 / IDF 83-2006.

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



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