



## Brain Heart Infusion Broth

M210I

Brain Heart Infusion Broth is highly nutritious and is recommended for the propagation of pathogenic cocci and other fastidious organisms associated with blood culture work and allied pathological investigations and for enrichment of *Staphylococcus aureus*.

### Composition\*\*

Ingredients	Gms / Litre
Peptic digest of animal tissue	10.000
Calf brain, infusion (solids)	12.500
Beef heart, infusion (solids)	5.000
Dextrose	2.000
Sodium chloride	5.000
Disodium phosphate	2.500
Final pH ( at 25°C)	7.4±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 37 grams in 1000 ml distilled water. Dispense into bottles or tubes and 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.

### Principle And Interpretation

Rosenow (1) devised the original Brain Heart Infusion Broth by adding brain tissue to dextrose broth. Brain Heart Infusion 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). With the additions of desired additives this medium can be specifically adopted for cultivation of various bacteria. Addition of 6.5% sodium chloride makes it selective for isolation of various salt tolerant bacteria like Enterococci.

Brain Heart Infusion Broth is also used for the preparation of inocula for use in antimicrobial susceptibility tests.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Colour and Clarity of prepared medium

Light amber coloured, clear to slightly opalescent solution

#### Reaction

Reaction of 3.7% 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.

#### Cultural Response

Organism	Inoculum (CFU)	Growth
<b>Cultural Response</b>		
<i>Neisseria meningitidis</i> ATCC 50-100 13090		luxuriant
<i>Staphylococcus aureus</i> ATCC 25923	50-100	luxuriant
<i>Streptococcus pneumoniae</i> ATCC 6303	50-100	luxuriant

*Streptococcus pyogenes* 50-100 luxuriant  
*ATCC 19615*

### Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium between 2 - 8°C. Use before expiry date on the label.

### Reference

1. Rosenow, 1919, J. Dental Res., 1:205.
2. Roseburg T. et al, 1944, J. Inf. Dis., 74:131.
3. Conant N.F., 1950, Diagnostic Procedures and Reagents, 3rd Ed., APHA, Inc., New York, p. 452.
4. MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
5. International Organization for Standardization (ISO), 1983, Enumeration of Staphylococcus aureus, Draft ISO/DIS 6880.

Revision : 1 / 2011



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