

Brain heart infusion broth**Code 84626.0500****Also known as**

BHI, BHI broth

Intended use

For the cultivation of fastidious and non-fastidious microorganisms.

Formula * - Composition in g/L

Brain infusion solids.....	12.5
Beef heart infusion solids.....	5.0
Peptones.....	10.0
Glucose.....	2.0
Sodium chloride.....	5.0
Disodium hydrogen phosphate.....	2.5

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

Final pH 7.4 ± 0.2 at 25 °C.

Instructions for preparation

Dissolve 37 g in 1 litre of purified water, by heating if necessary. Dispense the medium into flasks or tubes of suitable capacity. Sterilise in the autoclave at 121 °C for 15 minutes.

Principle of the method and general information

Brain heart infusion broth is a highly nutritious general-purpose growth medium for culturing fastidious and non-fastidious microorganisms, such as streptococci, pneumococci, meningococci, moulds and yeasts.

Brain heart infusion broth was first described by Rosenow. He prepared a rich medium for culturing streptococci by combining dextrose broth and brain tissue. Hayden modified the original formula while working with dental pathogens. The current formula is a modification of Rosenow and Hayden media.

Brain heart infusion broth can be supplemented with antibiotics, varying amounts of sodium chloride, yeast extract, and serum to provide a rich medium for bacteria, yeasts and pathogenic fungi

Brain heart infusion broth is recommended for the preparation of the culture of *S.aureus* to be used for coagulase test.

Instruction for use

For laboratory use only.

The experimental procedure depends on the purpose for which the medium is used. Refer to the various compendia for the details of the procedures.

Limitations

It is recommended that biochemical and/or serological tests be performed on pure culture for complete identification of cultivated microorganisms.

Quality Control

Physical characteristics:

Appearance of powder
Appearance of prepared medium
pH (25°C)

Beige, fine, homogeneous, hygroscopic powder
Brown, limpid
7.4 ± 0.2

Microbiological characteristics:

Test strains	Incubation T° / t / At.	Inoculation method	Growth characteristics	Productivity rate
<i>S. aureus</i> ATCC 25923	37 °C/ 24 h / AE	DE	Good growth	DDI ≤ 1
<i>S. pyogenes</i> ATCC 19615	37 °C/ 24 h / AE	DE	Good growth	DDI ≤ 1
<i>S. pneumoniae</i> ATCC 6301	37 °C/ 24 h / AE	DE	Good growth	DDI ≤ 1
<i>E. faecalis</i> ATCC 19433	37 °C/ 24 h / AE	DE	Good growth	DDI ≤ 1
<i>N. gonorrhoeae</i> CB 9073	37 °C/ 24 h / AE	DE	Good growth	DDI ≤ 1
<i>C. albicans</i> ATCC 18804	37 °C/ 24 h / AE	DE	Good growth	DDI ≤ 1
<i>A. brasiliensis</i> ATCC 16604	25 °C/ 24 h / AE	DE	Good growth	DDI ≤ 1

Notes

DE : dilution to extinction method

DDI : Highest dilution showing growth on reference culture medium (RB) - highest dilution showing growth on culture medium under test (TB)
(considering the index as a positive value, e.g. 10⁻⁹: 9)

*Target organisms: DDI ≤ 1: the growth on TB shall be not more than 1 dilution lower than RB

Incubation atmosphere AE: aerobic incubation

ATCC is a registered trade mark of American Type Culture Collection; CB: strain obtained from Laboratory culture collection

References

- Rosenow, E. C. 1919. Studies on elective localization. J. Dent. Research 1:205-249.
- Hayden, R. L. 1923. Elective localization in the eye of bacteria from infected teeth. Arch. Int. Med. 32:828-849.

Storage conditions

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+10 °C to 30 °C and <60% RH).

Ordering information

84626.0500

Brain heart infusion broth

Bottle of 500 g