

## Brain Heart Infusion Broth

Liquid medium for the cultivation of various fastidious organisms and detection of staphylococci, according to ISO 6888.

### DESCRIPTION

Brain Heart Infusion Broth is a liquid medium used for the cultivation of fastidious and nonfastidious microorganisms, including aerobic and anaerobic bacteria, from clinical specimens, food and environmental samples.

This medium is especially suited for the cultivation of coagulase-positive staphylococci for the plasma coagulase test according to ISO 6888.

Brain Heart Infusion Broth is recommended by the APHA for examination of water and wastewater and by the CLSI for preparing inocula used in antimicrobial susceptibility tests.

### TYPICAL FORMULA

	(g/l)
Enzymatic Digest of Animal Tissues	10.0
Dehydrated Calf Brain Infusion	12.5
Dehydrated Beef Heart Infusion	5.0
Glucose	2.0
Sodium Chloride	5.0
Disodium Hydrogen Phosphate, Anhydrous	2.5
Final pH 7.4 ± 0.2 at 25°C	

### METHOD PRINCIPLE

Enzymatic digest of animal tissues and brain-heart infusion provide amino acids, nitrogen, carbon, vitamins and minerals for organisms growth. Glucose is the carbohydrate source. Sodium chloride maintains the osmotic balance of the medium. Disodium phosphate is the buffering agent.

### PREPARATION

Dehydrated medium Suspend 37 g of the powder in 1 liter of distilled or deionized water. Mix well. Heat to boil shaking frequently until completely dissolved. Distribute into final containers. Sterilize in autoclave at 121°C for 15 minutes.

### TEST PROCEDURE

If material is being cultured directly from a swab, insert the swab into the broth after inoculation of plated media. For liquid specimens, transfer a loopful of the specimen into the broth medium using a sterile loop or aseptically pipette the specimen onto plated medium and into the broth. Examine for growth after 24-72 hours of incubation.

NB. It is recommended that liquid media for anaerobic incubation should be reduced prior to inoculation by placing tubes (with loosened caps) under anaerobic conditions for 18-24 hours. Alternatively, the media may be reduced by bringing the media up to 100°C in a boiling waterbath. Loosen screw caps slightly before heating, and tighten during cooling to room temperature.

To perform plasma coagulase tests, according to ISO 6888, inoculate tubes of Brain Heart Infusion Broth with selected colony from Baird Parker Agar plates (ref. 10020). Incubate at 37 ± 1°C for 24 ± 2 hours. Add 0.1 ml of each culture to 0.3 ml of the rabbit plasma. Examine after 4-6 hours incubation at 37°C for clotting of the plasma.

### INTERPRETING RESULTS

Turbidity indicates microbial growth.

The coagulase test is considered positive if the clot volume is more than half of the original liquid volume.

### APPEARANCE

Dehydrated medium: free-flowing, homogeneous, light beige.

Prepared medium: clear, amber.

### STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Store bottles and tubes at 10-25°C away from light. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

### SHELF LIFE

Dehydrated medium: 4 years.

Medium in bottles: 3 years.

Medium in tubes: 2 years.

Distribué par :

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**QUALITY CONTROL**

Tubes are inoculated with the microbial strains indicated in the QC table.

Inoculum for productivity:  $\leq 100$  CFU

Incubation conditions:  $37 \pm 1^\circ\text{C}$  for  $24 \pm 2$  hours. 40-48 h under anaerobic atmosphere for *B. fragilis*.

**QC Table.**

Microorganism		Growth
<i>Staphylococcus aureus</i>	WDCM 00034	Good
<i>Escherichia coli</i>	ATCC® 25922	Good
<i>Streptococcus pneumoniae</i>	ATCC® 6305	Good
<i>Bacteroides fragilis</i>	ATCC® 25285	Good

**WARNING AND PRECAUTIONS**

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is intended for *In vitro* diagnostic use and must be used only by properly trained operators.

**DISPOSAL OF WASTE**








Disposal of waste must be carried out according to national and local regulations in force.

**BIBLIOGRAPHY**

1. EN ISO 11133:2014. Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media.
2. APHA (2012): Standard Methods for the Examination of Water. 22<sup>nd</sup> ed. American Public Health Association, American Water Works Association, Water Environment Federation, Washington, D.C.
3. ISO 6888-3:2003. Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of coagulase-positive staphylococci (*Staphylococcus aureus* and other species) – Detection and MPN technique for low numbers.
4. Clinical and Laboratory Standards Institute (CLSI). 2004. Quality Control for Commercially Prepared Microbiological Culture Media; Approved Standard, 3<sup>rd</sup> ed. M22-A3. CLSI, Wayne, PA.
5. ISO 6888-1:1999/Amd 1:2003. Inclusion of precision data.
6. ISO 6888-1:1999. Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of coagulase-positive staphylococci (*Staphylococcus aureus* and other species) – Part 1: Technique using Baird-Parker agar medium.

PRESENTATION		Contents	Ref.
Brain Heart Infusion Broth	Tubes	20 x 10 ml tubes	24104
Brain Heart Infusion Broth	Tubes	20 x 2 ml tubes	24141
Brain Heart Infusion Broth	Tubes	20 x 3 ml tubes	24475
Brain Heart Infusion Broth	Tubes	50 x 5 ml tubes	27502
Brain Heart Infusion Broth	Bottles	6 x 200 ml bottles	412010
Brain Heart Infusion Broth	Dehydrated medium	500 g of powder	610008
Brain Heart Infusion Broth	Dehydrated medium	100 g of powder	620008
Brain Heart Infusion Broth	Dehydrated medium	5 kg of powder	6100085

**TABLE OF SYMBOLS**

<b>LOT</b> Batch code	<b>IVD</b> <i>In vitro</i> Diagnostic Medical Device	 Manufacturer	 Use by	 Fragile, handle with care
<b>REF</b> Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult Instruction For Use	 Do not reuse

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