

# Brain Heart Infusion Broth ISO

Cat. 1331

For the confirmation of coagulase-positive staphylococci.

## Practical information

| Applications | Categories                        |
|--------------|-----------------------------------|
| Confirmation | Coagulase-positive staphylococcus |

Industry: Food

Regulations: ISO 11133 / ISO 6888

## Principles and uses

Brain Heart Infusion Broth ISO (BHI Broth) is a general purpose medium recommended by the ISO normative 6888-1 for the confirmation of coagulase-positive staphylococci.

Calf brain infusion, enzymatic digest of animal tissue and beef heart infusion provide nitrogen, vitamins, minerals and amino acids essential for growth. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Sodium hydrogenphosphate is a buffer. Glucose is the fermentable carbohydrate providing carbon and energy.

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

## Formula in g/L

|                                    |    |                              |      |
|------------------------------------|----|------------------------------|------|
| Glucose                            | 2  | Sodium chloride              | 5    |
| Enzymatic digest of animal tissues | 10 | Calf brain infusion          | 12,5 |
| Beef heart infusion                | 5  | Di-sodium hydrogen phosphate | 2,5  |

## Preparation

Suspend 37 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into appropriate containers and sterilize in autoclave at 121°C for 15 minutes.

## Instructions for use

For the confirmation of coagulase-positive staphylococci according to ISO 6888:

- Collect the inoculum from the surface of each selected colony using a sterile wire and introduce the inoculum in a tube or bottle that contains the Brain-heart infusion.
- Incubate at 35-37 °C for 24±2 hours.
- Under aseptic conditions, add 0,1 ml of each culture to 0,3 ml of rabbit plasma in sterile hemodialysis tubes or bottles.
- Incubate at 35-37°C.
- Examine the coagulase plasma by inclining the tube after incubating for 4 to 6 hours.

If the test is negative:

- Re-examine after 24 hours of incubation or after the incubating period recommended by the manufacturer is over.
- As a negative control for each plasma lot, add 0.1 ml of Brain-heart infusion to the quantity of rabbit plasma indicated by the manufacturer and incubate without inoculation.
- For the test to be valid, the plasma control should not show any signs of coagulation.

## Quality control

| Solubility | Appearance  | Color of the dehydrated medium | Color of the prepared medium | Final pH (25°C) |
|------------|-------------|--------------------------------|------------------------------|-----------------|
| w/o rests  | Fine powder | Beige                          | Ámber                        | 7,4±0,2         |

## Microbiological test

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According to ISO 11133:

Incubation conditions: (24±2 h / 37±1 °C).

Inoculation conditions: (<100 CFU).

Microorganisms

Staphylococcus aureus ATCC 25923

Specification

Turbidity (1-2)

## Storage

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Temp. Min.:2 °C

Temp. Max.:25 °C

## Bibliography

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International Standard ISO 6888-1 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.