OXALIS Diagnostics Pvt. Ltd.

# Technical Data

## Brain Heart Infusion Broth-Supplemented with 0.05% SPS (10 mL,20mL, 50mL, 70mL)

Brain Heart Infusion Broth with 0.05% SPS is generally recommended for the detection of most aerobic /anaerobic bacteria and other fastidious microorganisms in blood.

**Product Presentation:**

| Cat No. | Product description | Pack Size |
|---|---|---|
| **22010010010** | Brain Heart Infusion with 0.05% SPS | 10 mL |
| **22010010020** | Brain Heart Infusion with 0.05% SPS | 20 mL |
| **22010010050** | Brain Heart Infusion with 0.05% SPS | 50 mL |
| **22010010070** | Brain Heart Infusion with 0.05% SPS | 70 mL |

**Principle and interpritation**

BHI Medium is useful for cultivating a wide variety of microorganisms since it is a highly nutritive medium. It is also used to prepare the inocula for antimicrobial susceptibility testing. BHI Broth is also the preferred medium for anaerobic bacteria, yeasts and moulds This medium is nutritious and well buffered to support the growth of wide variety of organisms. With the addition of 10% defibrinated sheep blood, it is useful for isolation and cultivation of *Histoplasma capsulatum* and other fungi. For selective isolation of fungi, addition of gentamicin and/or chloramphenicol is recommended. Proteose peptone, Calf Brain, Infusion from 200g and Beef Heart, Infusion from 250g serve as sources of carbon, nitrogen, essential growth factors, amino acids and vitamins. Dextrose serves as a source of energy. Disodium phosphate helps in maintaining the buffering action of the medium whereas sodium chloride maintains the osmotic equilibrium of the medium. SPS acts as an anticoagulant and as an inhibitor of the bacteriostatic and bactericidal effects of blood cells and plasma factors.

**Composition**

| Ingredients | Grams / Litre |
|---|---|
| Calf Brain, Infusion from 200g | 7.70 |
| Beef Heart, Infusion from 250g | 9.80 |
| Proteose Peptone | 10.00 |
| Dextrose | 2.00 |
| Sodium Chloride | 5.00 |
| Disodium Phosphate | 2.50 |
| SPS | 0.50 |

Final pH ( at 25°C) 7.4±0.2

**Formula adjusted, standardized to suit performance parameters

**Type of specimen**

Clinical samples: Blood

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## Specimen Collection and Preparation

- ✓ No special preparation of the patient is required prior to sample collection by approved techniques.
- ✓ The specimen must be collected using sterile techniques to reduce the chance of contamination.
- ✓ Collect 1:10 ratio blood to broth, For Adult approximately 5 mL of patient's blood when using the 50 mL,approximately 7 mL of patient's blood when using the 70 mL Blood culture medium bottle and approximately 1-3 mL when using the 20 mL Blood culture medium bottle and approximately 0.5-1.5 mL when using the 5-10 mL Blood Culture Medium bottle.
- ✓ Samples should be stored at 2°C-8°C if not tested immediately.
- ✓ Avoid using hemolysed samples for testing.

## Directions

- ✓ Label the ready to use blood culture bottle.
- ✓ Remove the Aluminium foil cap. Disinfect the part of the rubber stopper which is now exposed.
- ✓ Draw patient's blood with the sterile or disposable needle and syringe as explained in specimen collection and disposable column.
- ✓ Transfer the blood sample immediately into the culture bottle by puncturing the rubber stopper with the needle and injecting the blood. Venting: Use sterile venting needle. Keep the bottle in an upright position preferably in a biological safety cabinet, place an alcohol swab over the rubber stopper and insert the venting needle with filter through it. Insertion and withdrawal of the needle should be done in a straight line.
- ✓ Discard the needle and mix the contents by gently inverting the bottle 2-3 times. Do Not vent the bottle for anaerobic cultures.
- ✓ Incubate at 35±2°C for 18-24 hours and further for seven days.

## Storage and Stability

- ✓ Store the blood culture media in cool, dry place at 15°C-25°C away from direct light.
- ✓ Stability of the blood culture media is as per the expiry date mentioned on the label.

## Quality Control

**Appearance:** Amber coloured, clear solution without any precipitate.
**Appearance on Addition of Blood:** Cherry red coloured opaque solution without any blood clot.
**Cultural Response:** Cultural response is observed after an incubation of 18-24 hours at 35°C-37°C and subculturing is carried out on Blood Agar.

| Organism (ATCC) | Growth | Subculturing on Blood Agar |
|---|---|---|
| *Staphylococcus aureus* (25923) | Good | Beta Haemolysis |
| *Streptococcus pyogenes* (19615) | Good | Beta Haemolysis |
| *Bacteroides vulgatus* (8482) | Good | - |

## Interpretation of Results

- ✓ Growth in the broth medium is indicated by the presence of turbidity. The bottles should be held for 7 days before reporting a negative blood culture.

## Warranty

- ✓ This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

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**Remarks**

- ✓ Brain Heart Infusion with 0.05% SPS blood culture media are for laboratory and professional use only.
- ✓ Not for medicinal use.
- ✓ Do not use bottles that have cracks or defects.
- ✓ Inoculated bottles should be decontaminated prior to discarding. Clinical samples and microbial cultures should be considered as pathogenic biohazard and handled accordingly.
- ✓ Blood drawn for culture must not be allowed to clot. If bacteria are entrapped within a clot, their presence may go undetected.

**Disposal**

Disposal of infectious material and material that comes in to contact with clinical sample must be decontaminated and dispose of by autoclaving or incineration or established laboratory procedures. User must be ensure safe disposal of used or unusable preparation of the products.

**Reference**

1. Atlas R. M., 1993, Handbook of Microbiological Media, 147-153, CRC Press, Boca Raton, FL.
2. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
3. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
5.Diagnostic Microbiology , Baily & Scott, 9th Edition , Ellen jo Baron, etal. , Mosby 1994.

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