



Technical Data

BHI Broth (Gamma Irradiated)

M210G

Intended Use:

BHI Broth (Gamma Irradiated) is employed for the propagation of fastidious pathogenic cocci and other organisms associated with blood culture work and allied pathological investigations.

Composition**

Ingredients	Gms / Litre
HM infusion powder #	12.500
BHI powder	5.000
Proteose peptone	10.000
Dextrose (Glucose)	2.000
Sodium chloride	5.000
Disodium hydrogen phosphate	2.500
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Calf brain infusion from

Directions

Sterile powder can be used directly for preparing the medium for use. For sterile liquid medium aseptically add 37.0 gm in 1000 ml sterile distilled water. Heat if necessary to dissolve the medium completely. DO NOT AUTOCLAVE OR OVERHEAT. Excessive heating is detrimental. Dispense aseptically in sterile tubes or bottles as desired. 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. (Sterilised by gamma irradiation)

Principle And Interpretation

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 (Gamma Irradiated) is a modification of the original formulation of Rosenow, where he added pieces of brain tissues to dextrose broth (9). BHI Broth is also the preferred medium for anaerobic bacteria, yeasts and moulds (7,2,11,). This medium is nutritious and well buffered to support the growth of wide variety of organisms (7,10,3). With the addition of 10% defibrinated sheep blood, it is useful for isolation and cultivation of *Histoplasma capsulatum* (4) and other fungi. For selective isolation of fungi, addition of gentamicin and/or chloramphenicol is recommended (8).

Proteose peptone, HM infusion powder and BHI powder 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.

Type of specimen

Clinical samples : Blood and other pathological samples; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6). For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (11,1,12). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. Read the label before opening the container. Wear protective gloves/protective clothing/ eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. As organisms differ in their nutritional requirements, some fastidious organisms may be inhibited or may show poor growth.
2. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
3. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light to medium amber coloured, clear solution without any precipitate **Reaction**

Reaction of 3.7% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Stability test

Light yellow coloured clear solution without any precipitation sedimentation at room temperature for 7 days.

Sterility Testing

No growth is observed after 14 days for Bacteria at 30-35°C and for Fungi at 20-25°C.

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth
<i>Neisseria meningitidis</i> ATCC 13090	50-100	good-luxuriant
<i>Streptococcus pneumoniae</i> ATCC 6303	50-100	good-luxuriant
<i>Streptococcus pyogenes</i> ATCC 19615	50-100	good-luxuriant
<i>Candida albicans</i> ATCC 10231 (00054*)	50-100	good-luxuriant
<i>Staphylococcus aureus subsp. aureus</i> ATCC 25923 (00034*)	50-100	good-luxuriant
<i>Enterococcus faecalis</i> ATCC 29212 (00087*)	50-100	good-luxuriant

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

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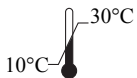
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 IVD

In vitro diagnostic medical device



CE Marking



Storage temperature



Do not use if package is damaged

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