Product Insert

BRAIN HEART INFUSION AGAR (BHI Agar)

Products

AS-6426 Brain Heart Infusion Agar (BHI Agar) 4 plates / pkg

Intended Use

Brain Heart Infusion (BHI) Agar is a general purpose enriched non-selective media for the cultivation of a wide variety of microorganisms, including yeasts, molds, and bacteria.

Summary

BHI Agar is an enriched non-selective media used for the isolation and cultivation of a wide variety of bacteria, including yeast and molds. The basic nutritive properties of this media are brain heart infusion from solids, meat peptone, and yeast extract. Dextrose provides a carbohydrate source for the fermentative microorganisms. Enrichment of the media with hemin and vitamin K_1 is for the enhanced recovery of anaerobes. This media is prepared, dispensed, and packaged under oxygen-free conditions to prevent the formation of oxidized products prior to use.

Formulation*

Brain Heart Infusion	17.50	g
Proteose Peptone	10.00	g
Dextrose	2.00	g
Sodium Chloride	5.00	g
Disodium Phosphate	2.50	g
Yeast Extract	5.00	g
Hemin (0.1% solution)	5.00	mL
Vitamin K_1 (1.0% solution)	1.00	mL
Agar	15.00	g
L-Cysteine Hydrochloride (25.0% solution)	2.00	mL
DI Water	1.00	L

Final pH: 7.2 ± 0.2 at 25° C
Final weight: 16.0 g ± 1.6 g

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

Precautions

For *IN VITRO DIAGNOSTIC USE* only. Utilize approved biohazard precautions and aseptic technique when using this product. This product is for use only by properly-trained and qualified personnel. Sterilize all biohazard waste prior to disposal.

Storage and Shelf Life

Storage: Upon receipt, store at room temperature in original package until used. Avoid overheating or freezing. Do not use media if there are signs of deterioration (shrinking, cracking, or discoloration due to oxidation of media) or contamination. The expiration date applies to the product in its original packaging and stored as directed. Do not use product past the expiration date shown on the label.

Shelf Life: 90 days from date of manufacture.

Procedure

Specimen Collection: Protect specimens for anaerobic culture from oxygen during collection, transportation, and processing. Consult appropriate references for detailed instructions concerning collection and transportation of anaerobes.

Methods for Use: BHI Agar should be inoculated directly with clinical specimen or from a broth that has been inoculated from a clinical specimen. Streak plates with inoculum to obtain isolated colonies and immediately place in an anaerobic atmosphere, incubating at 35-37°C for 18-48 hours. Extended periods of incubation may be required to recover some anaerobes. Detailed instructions for processing anaerobic cultures can be found in the listed references.

Materials Required, But Not Provided

Standard microbiological supplies and equipment such as loops, saline blanks, slides, staining supplies, microscope, incinerator / autoclave, incubators, anaerobic chamber / anaerobic jars, disinfectant, other culture media, and serological / biochemical reagents.

Interpretation of Results

This media supports good growth of many fastidious and non-fastidious anaerobes isolated from clinical specimens.

Limitations

BHI Agar will not provide complete information for identification of bacterial isolates. Additional test procedures and media are required for complete identification. It is recommended that a non-selective media, such as Brucella Blood Agar (BRU, catalog #: AS-111) also be inoculated from the same clinical specimen to assure recovery of all species present. Consult reference materials for additional information.

Quality Control

The following organisms are routinely used for quality control testing at Anaerobe Systems.

Organism Tested	ATCC #	Results	Time
Bacteroides fragilis	25285	Growth	24 hrs
Prevotella melaninogenica	25845	Growth	24 – 48 hrs
Fusobacterium mortiferum	25557	Growth	24 – 48 hrs
Fusobacterium necrophorum	25286	Growth	24 – 48 hrs
Clostridium perfringens	13124	Growth	24 hrs
Clostridium sporogenes	3584	Growth	24 hrs
Peptostreptococcus anaerobius	27337	Growth	24 hrs
Proteus mirabilis	12453	Growth	24 hrs
Propionibacterium acnes or Clostridium difficile	6919 9689	Growth	24 – 48 hrs 24 hrs
Staphylococcus aureus or Enterococcus faecalis	25923 29212	Growth	24 hrs 24 hrs
Escherichia coli	25922	Growth	24 hrs

User Quality Control: The final determination to the extent and quantity of user laboratory quality control must be determined by the end user.

If sterility testing is to be performed on this product, a representative sample of the lot(s) should be incubated anaerobically and aerobically for 48 – 96 hours.

If the nutritive/inhibitory capacity of this media is to be tested for performance, it is recommended that the following ATCC organisms be evaluated for growth/inhibition.

Organism	ATCC#	Expected Growth
B. fragilis	25285	24 hrs
C. perfringens	13124	24 hrs
P. anaerobius	27337	24 hrs
S. aureus	25923	24 hrs
E. coli	25922	24 hrs

Physical Appearance: BHI agar should appear opaque to translucent yellow in color.

References

1. Dowell, V. R., Jr., G. L. Lombard, F. S. Thompson and A. Y. Armfield. 1977. *Media for the Isolation, Characterization and Identification of Obligately Anaerobic Bacteria.* USDHHS, CDC. Atlanta, GA 30333.

2. Engelkirk, P. G., Duben-Engelkirk, J. and Dowell, V. R. 1992. *Principles and Practices of Clinical Anaerobic Bacteriology*. Star Publishing Co., Belmont, CA 94002.

3. Holdeman, L. V., F. P. Cato and W. E. C. Moore. 1987. *Anaerobe Laboratory Manual*. Virginia Polytechnic Institute and State University. Blacksburg, VA 24061

4. Jousimeis-Somer, H. R., Summanen, P., Citron, D. M., Baron, E. J., Wexler, H. M. and S. M. Finegold. 2002. *Wadsworth – KYL Anaerobic Bacteriology Manual*. Star Publishing Co., Belmont, CA 94002.

5. CLSI. *Quality Control for Commercially Prepared Microbiological Culture Media; Approved Standard- Third Edition.* (2004). CLSI document M22-A3. CLSI, 940 West Valley Road, Suite 1400, Wayne, PA 19087-1898.

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