

TMK 362– BRAIN HEART INFUSION BROTH

INTENDED USE

For detection of fastidious microorganisms in blood.

PRODUCT SUMMARY AND EXPLANATION

BHI Medium is used as a blood culturing system for cultivating a wide variety of microorganisms since it is a highly nutritive medium. This culture medium complies with the specifications given by EN ISO 6888 and APHA. BHI Broth is a modification of the original formulation of Rosenow, where he added pieces of brain tissues to dextrose broth. It is an enriched non-selective broth medium that is useful in the cultivation of fastidious and non-fastidious microorganisms. This medium will also support the growth of aerobic microorganisms from a variety of clinical and non-clinical specimens. For selective isolation of fungi, addition of gentamicin and/or chloramphenicol is recommended.

COMPOSITION

Ingredients	Gms / Ltr
Calf Brain infusions from 200 gm	12.500
Peptone	10.000
Beef heart Infusion from 250 gms	5.000
Sodium chloride	5.000
Disodium hydrogen phosphate	2.500
Dextrose	2.000

PRINCIPLE

The mixture of brain and heart infusions provides organic nitrogen, carbon, and vitamins. Dextrose is the carbohydrate source. A low concentration of dextrose is used to stimulate early growth. Sodium chloride maintains the osmotic environment. Disodium phosphate is the buffering agent in this medium and also helps neutralize the acids produced from the utilization of dextrose, thus maintain viability.

INSTRUCTION FOR USE

1. Remove the plastic cap and disinfect the part of the rubber stopper which is now exposed.
2. Draw patient's blood with the sterile needle and syringe and transfer the blood sample immediately into the culture bottle by puncturing the rubber stopper with the needle and injecting the blood.
3. Venting may be required for aerobic culture and not in case of anaerobic cultures.
4. Incubate at 35-37°C for 18-48 hours and further for 7 days to confirm negative results.

Note: Brain heart infusion broth is a ready to use liquid media in glass bottle. The medium is pre-sterilized, hence sterilization is not required.

QUALITY CONTROL SPECIFICATIONS

Appearance of the medium	: Light to medium amber colour, clear solution.
Quantity of Medium	: 25ml / 50ml of the medium in glass bottle
pH (at 25°C)	: 7.4 ± 0.2
Sterility Check	: Passes release criteria

INTERPRETATION

Cultural characteristics observed after incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100	Luxuriant	35-37°C	18-48 hours
<i>Staphylococcus aureus</i>	25923	50-100	Luxuriant	35-37°C	18-48 hours
<i>Staphylococcus aureus</i>	6538	50-100	Luxuriant	35-37°C	18-48 hours
<i>Streptococcus pneumoniae</i>	6303	50-100	Luxuriant	35-37°C	18-48 hours
<i>Streptococcus pyogenes</i>	19615	50-100	Luxuriant	35-37°C	18-48 hours
<i>Enterococcus faecalis</i>	29212	50-100	Luxuriant	35-37°C	18-48 hours
<i>Neisseria meningitidis</i>	13090	50-100	Luxuriant	35-37°C	18-48 hours
<i>Clostridium perfringes</i>	13124	50-100	Luxuriant	35-37°C	18-48 hours

PACKAGING:

Aluminium capped bottles containing 25ml (Paediatric) or 50 ml (Adult) media.

STORAGE

On receipt, store bottles in the dark at 10 to 25° C. Avoid freezing and overheating. The medium may be used up to the expiration date and incubated for the recommended incubation times. Bottles from unopened packages can be used up to the expiration date. Opened bottles must be used immediately.

Product Deterioration: Do not use bottles if they show evidence of microbial contamination, discoloration, or any other signs of deterioration.

DISPOSAL

After use, prepared media, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

- Rosenow, Dental Research, 1, 205. (1919).
- Rosenburg T. et al, J. Inf. Dis., 74, 131. (1944).
- Mc Faddin J.F., Media for Isolation-Cultivation-Identification-Maintenance of medical Bacteria, Vol. I, Williams and Wilkins, Baltimore (1985).
- Lennette, Balows, Housler and Shadomy (Eds.), Manual of Clinical Microbiology, 4th ed., ASM, Washington, D.C. (1985).
- Ajello L., George L., Kaplan W. and Kaufman L., CDC Laboratory Manual of Medical Mycology, Atlanta, Ga.: US. DHEW, Center for Disease Control. (1966).
- McDonough E., Geoge L., Ajello L. and Brinkman S., Mycopathol. Mycol. Appl.; 13, 113. (1960).
- Selection for vancomycin resistance in clinical isolates of *Staphy. haemolyticus*: R.S. Schwalbe, et al., J. Infect. Dis. 161, 45. (1990).



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 16th Feb. 2022

