Technical Data

Brain Heart Infusion Broth

LQ210D

Recommended for propagationof pathogenic coci and other fastidious organisms associated with blood andculture work

Composition**

	Gms / Litre
Calf brain, infusion from	200.000
Beef heart, infusion from	250.000
Proteose peptone	10.000
Disodium phosphate	2.500
Sodium chloride	5.000
Dextrose	2.000

**Formula adjusted, standardized to suit performance parameters

Directions

Label the ready to use blood culture bottle. Do not unscrew cap. remove the top of the screw 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 (LA038). 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.

Principle And Interpretation

Brain Heart Infusion 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. Brain Heart Infusion Broth is a modification of the original formulation of Rosenow, where he added pieces of brain tissues to dextrose broth (1). Brain Heart Infusion Broth is also the preferred medium for anaerobic bacteria, yeasts and moulds (2-4). This medium is nutritious and well buffered to support the growth of wide variety of organisms (2, 5, 6). With the addition of 10% defibrinated sheep blood it is useful for isolation and cultivation of *Histoplasma capsulatum* (7) and other fungi. For selective isolation of fungi, addition of gentamicin and/or chloramphenicol is recommended (8). Proteose peptone and infusions (calf brain and beef heart) 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.

Quality Control

Appearance
Sterile clear Brain Heart Infusion broth in glass bottle.

Colour
Light to medium amber coloured medium

Quantity of medium
500ml of medium in glass bottle

Reaction
7.20- 7.60

Sterility test
Passes release criteria

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

Organism	Growth
Enterococcus faecalis ATCC 29212	Luxuriant
Streptococcus pneumoniae ATCC 6303	Luxuriant
Streptococcus pyogenes ATCC 19615	Luxuriant
Neisseria meningitidis ATCC 13090	Luxuriant

Storage and Shelf Life

Store between 2-8°C. Use before expiry date on the label.

Reference

1. Rosenow, 1919, J. Dental Research, 1:205. 2. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore. 3. Atlas R. M., 1993, Handbook of Microbiological Media, 147-153, CRC Press, Boca Raton, FL. 4. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C. 5. Roseburg T. et al, 1944, J. Inf. Dis., 74:131 6. Conant N. F., 1950, Diagnostic Procedures and Reagents, 3rd Ed., APHA Inc., New York 7. Howard B., Keiser J. F., Weissfeld A. et al, 1994, Clinical and Pathogenic Microbiology, 2nd Ed., Mosby Co. 8. 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.

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