53286 Brain Heart Broth

For the cultivation of various fastidious, pathogenic microorganisms including yeasts and molds. These culture media is often used for the examination of water, wastewater, meat and for the examination of foods.

Composition:

Ingredients	Grams/Litre
Calf brains (infusion from 200g)	12.5
Beef heart (infusion from 250g)	5.0
Peptone	10.0
Sodium chloride	5.0
D(+)-Glucose	2.0
Disodium hydrogen phosphate	2.5
Final pH 7.4 +/- 0.2 (at 25°C)	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions :
Dissolve 37 g in 1 litre distilled water. Sterilize by autoclaving at 121°C for 15 minutes.

Principle and Interpretation:
Rosenow (1) devised the original medium by adding brain tissue to dextrose broth. These media are nutritious and well buffered to support the growth of a wide range of microorganisms such as streptococci, pneumococci, meningococci, etc. The media is especially suited for the cultivation of staphylococci for the plasma coagulase test and for setting up blood cultures. Addition of ascites permits the cultivation of gonococci. The agar improves growth of microaerophilic and anaerobic microorganisms. With the addition of 10% defibrinated sheep blood, it is useful for isolation and cultivation of Histoplasma capsulatum and other pathogenic fungi. If this medium is to be used for the selective isolation of fastidious fungi (especially of Histoplasma capsulatum and Blastomyces), the growth of the accompanying bacterial and saprophytic yeasts and moulds flora can be almost completely suppressed by adding follow recommanded components mixtures: 12 mg Penicillin (Cat. No. PENK) and 40 ug Streptomycin (Cat. No. S6501) per litre; 50 mg Chloramphenicol (Cat. No. C0378) and 500mg Cycloheximide (Cat. No. 01810) per litre; 50 mg Gentamicin (Cat. No. G1264) and/or 50 mg Chloramphenicol (Cat. No. C0378) per litre.
This medium is less suited for identifying hemolytic forms when blood has been added due to its glucose content. While handling Histoplasma capsulatum extreme care should be taken to avoid dissemination of its infective spores. The culture should be examined in a closed filtered air cabinet.

Cultural characteristics after 24-48 hours at 35-37ºC.

Organisms (ATCC)	Incubation	Conditions	Growth
Steptococcus pyrogenes (19615)	24h/35°C	aerobic/anaerobic	+/++
Streptococcus pneumoniae (6305)	24h/35°C	aerobic/anaerobic	+/++
Pseudomonas aeruginosa (27853)	24h/35°C	aerobic	+/++
Candida alibicans (60193)	48h/35°C	aerobic	+/++
Bacterio Fragilis (25285)	2-5d/35°C	anaerobic	+/++
Haemophilus influenzae (10211)	2-5d/35°C	microaerophilic	+/++

References:
1. Rosenow, Dental Research, 1, 205 (1919)
2. Rosenburg T. et al, J. Inf. Dis., 74, 131 (1944)
3. Mc Faddin J.F., Media for Isolation-Cultivation-Identification-Maintainance of medical Bacteria, Vol. I, Williams and Wilkins,Baltimore (1985)
4. Lennette, Balows, Housler and Shadomy (Eds.), Manual of Clinical Microbiology, 4th ed., ASM, Washington, D.C. (1985)
5. Ajello L., George L., Kaplan W. and Kaufman L., CDC Laboratory Manual of Medical Mycology, Atlanta, Ga.: US. DHEW, Center tor Disease Control (1966)
6. McDonough E., Geoge L., Ajello L. and Brinkman S., Mycopathol. Mycol. Appl.; 13, 113 (1960)
7. Production of 12α-hydroxysteroid dehydrogenase from Clostridium group P: I.A. MacDonald, Experientia 37, 451 (1981)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.