

70138 Brain Heart Infusion Agar

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
Brain extract	7.8
Heart extract	9.7
Proteose peptone	10.0
Sodium chloride	5.0
D(+)-Glucose	2.0
Disodium hydrogen phosphate	2.5
Agar	15.0
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 :

Suspend 52 g in 1 litre of distilled water. Boil to dissolve the medium completely. Distribute into tubes, plates or flasks and sterilize by autoclaving at 121°C for 15 minutes.

Principle and Interpretation:

Rosenow (1) devised the original medium by adding brain tissue to dextrose agar. These media are nutritious and well buffered to support the growth of a wide range of microorganisms such as streptococci, pneumococci, meningococci, etc. Addition of ascites permits the cultivation of gonococci. 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 recommended 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 18-24 hours at 35-37°C.

Organisms (ATCC)	Growth
<i>Escherichia coli</i> (25922)	+/++
<i>Streptococcus pneumoniae</i> (6305)	+/++
<i>Shigella flexneri</i> (12022)	+/++
<i>Candida albicans</i> (60193)	-/+
<i>Lactobacillus acidophilus</i> (4356)	+/++
<i>Chlostridium perfringens</i> (10543)	+/++



References:

1. Rosenow, Dental Research, 1, 205 (1919)
2. Rosenberg T. et al, J. Inf. Dis., 74, 131 (1944)
3. Mc Faddin J.F., Media for Isolation-Cultivation-Identification-Maintenance 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 for Disease Control (1966)
6. McDonough E., George L., Ajello L. and Brinkman S., Mycopathol. Mycol. Appl.; 13, 113 (1960)
7. Selection for vancomycin resistance in clinical isolates of *Staphy. haemolyticus*: R.S. Schwalbe, et al., J. Infect. Dis. 161, 45 (1990)

