

Brain Heart Broth

For the cultivation of various fastidious pathogenic microorganisms.

These culture media comply with the recommendations given in the Standard Methods for the Examination of Water and Wastewater (1992). The broth satisfies the requirements of the DIN Norm 10163 for the examination of meat and LMBG (German Food and Consumer Goods Law) for the examination of foods.

Mode of Action

These culture media are based on the principle of the ROSENOW broth containing small pieces of brain tissue (ROSENOW 1919) and can be used to cultivate many fastidious bacteria such as streptococci, pneumococci, meningococci, etc. Addition of ascites permits the cultivation of gonococci.

Brain heart broth is especially suited for the cultivation of staphylococci for the plasma coagulase test and for setting up blood cultures. The growth of anaerobic or microaerophilic bacteria is considerably improved by adding small quantities of agar-agar (approx. 0.05-0.2 %) to the broth.

QUEIROZ et al. (1987) developed a selective agar for cultivating *Campylobacter pylori* on the basis of brain heart agar. It is called Belo Horizonte Medium /BHM).

Typical Composition (g/litre)

Nutrient substrate (brain extract, heart extract and peptones) 27.5; D(+)-glucose 2.0; sodium chloride 5.0; di-sodium hydrogen phosphate 2.5.

Preparation

Suspend 37 g Brain Heart Broth/litre, autoclave (15 min at 121 °C).

pH: 7.4 ± 0.2 at 25°C.

The broth is clear and brown.

Experimental Procedure and Evaluation

Depend on the purpose for which the media are used.

Literature

American Public Health Association, American Water Works Association and Water Pollution Control Federation: Standard Methods for the Examination of Water and Wastewater, 20th ed., Washington, 1998.

Bundesgesundheitsamt: Amtliche Sammlung von Untersuchungsverfahren nach § 35 LMBG. Beuth Verlag Berlin, Köln.

DIN Deutsches Institut für Normung e.V.: Mikrobiologische Untersuchung von Fleisch und Fleischerzeugnissen. Bestimmung Koagulase-positiver Staphylokokken. Referenzverfahren - **DIN 10163**.

QUEIROZ, D.M.M., MENDES, E.N., a. ROCHA, G.A.: Indicator medium for isolation of *Campylobacter pylori*. - *J. Clin. Microbiol.*, **25**; 2378-2379 (1987).

ROSENOW, E.C.: Studies on elective localization. Focal infection with special reference to Oral sepsis. - *Journ. Dental Res.*, **1**; 205-249 (1919).

Ordering Information

Product	Merck Cat. No.	Pack size
Brain Heart Broth	1.10493.0500	500 g

Quality control

Test strains	Incubation	Conditions	Growth
<i>Streptococcus pyogenes</i> ATCC 19615	24 h/35 °C	aerobic / anaerobic	good / very good
<i>Streptococcus pneumoniae</i> ATCC 6305	24 h/35 °C	aerobic / anaerobic	good / very good
<i>Pseudomonas aeruginosa</i> ATCC 27853	24 h/35 °C	aerobic	good / very good
<i>Candida albicans</i> ATCC 60193	48 h/35 °C	aerobic	good / very good
<i>Bacteroides fragilis</i> ATCC 25285	2-5 d/35 °C	anaerobic	good / very good
<i>Haemophilus influenzae</i> ATCC 10211	2-5 d/35 °C	microaerophilic	good / very good
<i>Staphylococcus aureus</i> ATCC 25923	24 h / 35 °C	aerobic	good / very good