

Hartley Broth w/ 0.05% SPS

LQ095

Intended use

For paediatric use. A qualitative test for the recovery of anaerobic and facultative microorganisms. *Sterile, in glass bottles.*

Composition**

Ingredients	g / L
HM hydrolysate #	29.000
Sodium polyanethol sulphonate (SPS)	0.500
Final pH (at 25°C)	7.6±0.2

Equivalent to Tryptic digest of heart muscle

**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

Hartley (1) described the value of tryptic digest of muscle for the production of diphtheria toxin. Since then it is used as a general-purpose broth, capable of initiating the growth of demanding (fastidious) organisms from a small inocula. Hartley's Digest Broth can be used for the recovery of fastidious organisms such as Group A, C, G Streptococci and *Streptococcus pneumonia* from small inocula. Douglas (2) used the same medium to recover *Corynebacterium diphtheriae*, while Monckton (3) used it in an enrichment medium for *C. diphtheriae*. Hartley's Digest Broth may be used for cultivation of blood samples, sterility testing, production of diphtheria toxin etc. Hartleys Digest Broth is prepared as per the method described by Cruickshank (4). HM hydrolysate provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and other essential nutrients. Sodium Polyanethole Sulphonate (SPS) which is an anticoagulant in culture bottles promotes optimal recovery of organisms from blood. It acts to inhibit phagocytosis and to neutralize the antibacterial activity of fresh blood components.

Type of specimen

Clinical sample: Blood

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Further biochemical and serological testing is required for complete identification.
2. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
3. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Sterile clear Hartley Broth w/ 0.05% SPS in glass bottle.

Colour

Light yellow coloured clear solution

Quantity of Medium

20 ml of medium in glass bottle. (Volume of blood for paediatrics use - 1 to 3 ml)

pH

7.40- 7.80

Sterility Check

Passes release criteria

Cultural response

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

Organism	Growth
<i>Streptococcus pneumoniae</i> ATCC 6303	Luxuriant
<i>Streptococcus pyogenes</i> ATCC 19615	Luxuriant
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	Luxuriant
<i>Corynebacterium</i> <i>diphtheriae</i> ATCC 11913	Luxuriant

Key : (*) Corresponding WDCM numbers

Storage and Shelf Life

On receipt store between 15-30°C. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

- Hartley P., 1922, J. Path. Bact., 25:479.
- Douglas S. R., 1922-23, Brit. J. Expt. Pathol., 3:263.
- Monckton J. C., 1947, Bull Inst. Med. Lab. Technol., 13(1):2.
- Cruickshank R., 1962, "Mackie and McCartneys Handbook of Bacteriology" 10th Ed., Livingstone Ltd., Edinburgh and London, pp. 192.
- Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
- Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

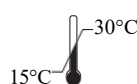
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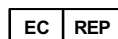
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