

**Hartleys Digest Broth****M551**

Hartleys Digest Broth is recommended as general-purpose medium for the cultivation of a wide variety of bacteria from blood especially fastidious Streptococci and *Corynebacterium diphtheriae*.

**Composition\*\*\***

Ingredients	Gms / Litre
Tryptic digest of heart muscle	29.000
Final pH ( at 25°C)	7.6±0.2

\*\*\*Formula adjusted, standardized to suit performance parameters

**Directions**

Suspend 29 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Dispense as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

**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. Hartleys Digest Broth can be used for the recovery of fastidious organisms such as Group A, C, G Streptococci and *Streptococcus pneumoniae* from small inocula. Douglas (3) used the same medium to recover *Corynebacterium diphtheriae*, while Monckton (2) used it in an enrichment medium for *C. diphtheriae*. Hartleys 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) by the tryptic digestion of de-fatted, fresh ox-heart under controlled conditions.

**Quality Control****Appearance**

Cream to yellow homogeneous free flowing powder

**Colour and Clarity of prepared medium**

Light yellow coloured, clear solution without any precipitate

**Reaction**

Reaction of 2.9% w/v aqueous solution at 25°C. pH : 7.6±0.2

**Cultural Response**

M551: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth				
<i>Corynebacterium diphtheriae</i> ATCC 11913	50-100	luxuriant				
<i>Enterococcus faecalis</i> ATCC 29212	50-100	luxuriant				
<i>Staphylococcus aureus</i> ATCC 25923	50-100	luxuriant				
<i>Streptococcus pneumoniae</i> ATCC 6303	50-100	luxuriant				
<i>Streptococcus pyogenes</i> ATCC 19615	50-100	luxuriant				

**Reference**

- Hartley P., 1922, J. Path. Bact., 25:479.
- Monckton J. C., 1947, Bull Inst. Med. Lab. Technol., 13(1):2.
- Douglas S. R., 1922-23, Brit. J. Expt. Pathol., 3:263.
- Cruickshank R., 1962, "Mackie and McCartney's Handbook of Bacteriology" 10th Ed., Livingstone Ltd., Edinburgh and London, pp. 192.

**Storage and Shelf Life**

Store below 30°C and prepared medium at 2-8°C. Use before expiry period on the label.