

Hugh Leifson Medium

LQ296X

Intended use

Recommended for the detection of aerobic and anaerobic fermentation of glucose.

Composition**

Ingredients	g / L
Peptone	2.000
Sodium chloride	5.000
Dipotassium hydrogen phosphate	0.300
Glucose (Dextrose)	10.000
Bromothymol blue	0.030
Agar	3.000
Final pH (at 25°C)	7.1±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Label the ready to use LQ296X bottle. Inoculate the sample and incubate at specified temperature and time. In an addition for anaerobic condition, a set of tubes with 5mm paraffin oil may be layered on surface of medium for the differentiation of oxidative and fermentative organisms.

Principle And Interpretation

Hugh Leifson Medium was formulated by Hugh and Leifson (1). They described the taxonomic significance of fermentative and oxidative metabolism of carbohydrates in gram-negative intestinal bacteria. It is recommended by BIS (2) for the isolation and cultivation of *Vibrio cholerae* and other *Vibrio* species which cause food poisoning.

The medium contains a high concentration of carbohydrate and low concentration of peptone to avoid the possibility of an aerobic organism utilizing peptone and producing an alkaline condition which would neutralize slight acidity produced by an oxidative organism (3). Dipotassium phosphate promotes fermentation and acts as pH controlling buffer. Agar concentration enables the determination of motility and aids in distribution of acid throughout the tube produced at the surface of medium. Oxidative organisms produce acid in unsealed tube with little or no growth and no acid formation in sealed tube while fermentative organisms produce acid in both sealed and unsealed tubes.

Type of specimen

Isolated microorganism

Specimen Collection and Handling:

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

Warning and Precautions

In Vitro diagnostic Use. 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. Other biochemical tests must be performed in conjunction for confirmation.
2. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.

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 Hugh Leifson Medium in glass bottle

Colour

Green Coloured solution

Quantity of Medium

10 ml of medium in glass bottle

pH

6.90-7.00

Sterility Check

Passes release criteria

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18- 48 hours.

Organism	Aerobic fermentation	Anaerobic fermentatoin
<i>Vibrio cholerae</i> ATCC 15748	acid (yellow) and gas production, positive reaction	acid (yellow) and gas production, positive reaction
<i>Vibrio parahaemolyticus</i> ATCC 17802 (00037*)	greenish blue, negative reaction	acid (yellow) and gas production, positive reaction

Key- (*) Corresponding WDCM number

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 (4,5).

Reference

- Hugh and Leifson, 1953, J. Bacteriol., 66:24.
- Bureau of Indian Standards, IS:5887 (Part V) 1976, reaffirmed 2005.
- MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Co., St. Louis. Wilkins, Baltimore.
- 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.

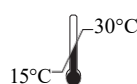
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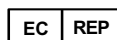
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IVD *In vitro* diagnostic
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Storage temperature



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CE Marking



**Do not use if
package is damaged**

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