

## TM 741 - HUGH LEIFSON GLUCOSE MEDIUM

### INTENDED USE

For differentiation of Staphylococci from Micrococci by anaerobic fermentation of glucose.

### PRODUCT SUMMARY AND EXPLANATION

Hugh Leifson Glucose Medium is formulated by Hugh and Leifson. Hugh Leifson Glucose Medium is prepared as described by FDA for differentiation of Staphylococci from Micrococci. They described the taxonomic significance of fermentative and oxidative metabolism of carbohydrates in gram-negative intestinal bacteria. There are two ways of utilizing carbohydrates by microorganisms, namely fermentation and oxidation. This property may be frequently used for the differentiation of some bacteria.

### COMPOSITION

Ingredients	Gms / Ltr
Peptone	2.000
Yeast extract	0.500
Sodium chloride	30.000
Dextrose (Glucose)	10.000
Bromocresol purple	0.015
Agar	3.000

### PRINCIPLE

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. Agar concentration enables the determination of motility and aids in distribution of acid throughout the tube produced at the surface of medium. Hugh Leifson Glucose Medium contains high salt concentration thus it is used for the identification of pathogenic and halophilic organisms and for testing aerobic and anaerobic breakdown of glucose by Staphylococci and Micrococci.

### INSTRUCTION FOR USE

- Dissolve 45.52 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Dispense into test tubes in duplicate for aerobic and anaerobic fermentation.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool the tubed medium in an upright position.

### QUALITY CONTROL SPECIFICATIONS

<b>Appearance of Powder</b>	: Light yellow to bluish grey homogeneous free flowing powder.
<b>Appearance of prepared medium</b>	: Purple coloured, clear to slightly opalescent gel forms in tubes as butts.
<b>pH (at 25°C)</b>	: 7.4±0.2

### INTERPRETATION

Cultural characteristics observed after an incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour of Medium (Aerobic)	Colour of Medium (Anaerobic)	Incubation Temperature	Incubation Period
<i>Micrococcus luteus</i>	10240	50-100	Good	Yellow	Pink-purple	35 - 37°C	18-24 Hours
<i>Staphylococcus aureus subsp. aureus</i>	25923	50-100	Good	Yellow	Yellow	35 - 37°C	18-24 Hours

**PACKAGING:**

In pack size of 100 gm and 500 gm bottles.

**STORAGE**

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.













**Product Deterioration:** Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

**DISPOSAL**

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

**REFERENCES**

1. Bacteriological Analytical Manual, 1995, 8th Ed., Food & Drug Administration, AOAC International, USA.
2. Baird Parker, 1966, International subcommittee on Staphylococci and Micrococci.
3. Finegold S. M., Martin W. J., and Scott E. G., 1978, Bailey and Scotts Diagnostic Microbiology, 5th Ed., The C.V. Mosby Co., St. Louis.
4. Hugh and Leifson, 1953, J. Bacteriol., 66:24.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6. 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.
7. MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.I, Williams and Wilkins, Baltimore.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Buckstrasse 10, 48163 Moenster, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

**NOTE:** Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

**\*For Lab Use Only**  
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