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ProductInformation

HUGH LEIFSON MEDIUM

Product Number **H8282**

Product Description
Hugh Leifson Medium is used to distinguish between the anaerobic and aerobic breakdown of glucose. The medium contains a high concentration of carbohydrate and a low concentration of peptic digest of animal tissue. This is to avoid an aerobic organism utilizing the peptic digest of animal tissue and producing an alkaline condition; which would neutralize the slight acidity produced by an oxidative organism.

Dipotassium phosphate promotes fermentation and acts as a pH controlling buffer. The agar concentration enables the determination of motility and aids in the distribution of acid throughout the tube. Oxidative organisms produce acid in an unsealed tube with little or no growth and no acid in a sealed tube. Fermentative organisms produce acid in both sealed and unsealed tubes.

Components

Item	g/L
Peptic Digest of Animal Tissue	2.00
Sodium Chloride	5.00
Dipotassium Phosphate	0.30
Glucose	10.00
Bromo Thymol Blue	0.05
Agar	2.00

Final pH (at 25 °C) 6.8 ± 0.2

Precautions and Disclaimer
For laboratory use only. Not for drug, household or other uses.

Preparation Instructions
Suspend 19.4 grams of Hugh Leifson Medium in 1000 mls of distilled water. Heat with frequent stirring. Boil to dissolve the medium completely. Dispense into tubes in duplicate for aerobic and anaerobic fermentations. Sterilize by autoclaving at 15 lbs. pressure (121 °C) for 15 minutes. Cool the tubed medium in an upright position.

Storage
Store the dehydrated medium at 24 °C and the prepared medium at 2-8 °C.

Procedure
1. The tubes for aerobic and anaerobic fermentation are inoculated and the surface of the agar of one tube of the duplicates is covered with a layer of (M3516) Mineral Oil.
2. Incubate at 37 °C.
3. Acid production is indicated by a change in color from green-blue to yellow.

Product Profile

Appearance	Bluish green colored, homogeneous, free flowing powder.
Gelling	Semisolid.
Color and Clarity	Greenish blue colored, clear to slightly opalescent gel forms in tubes as butts
Cultural Response	Cultural characteristics are observed after 18-48 hours at 35-37 °C.

Organism (ATCC)	Sealed with Oil	Unsealed	Motility
Enterobacter aerogenes (13048)	AG	AG	+
Escherichia coli (25922)	AG	AG	+
Pseudomonas aeruginosa (27853)	-	A	+
Salmonella typhi (6539)	AG	AG	+
Shigella sonnei (25931)	A	A	-

Key: A= acid production (yellow color)
G= gas production
- = unchanged (green) or alkaline (blue)

References
1. MacFaddin, J.F., (1985). Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria. Vol. 1. Williams and Wilkins. Baltimore, Maryland.
2. Finegold, S.M., et al. (1978) Bailey and Scott's Diagnostic Microbiology, 5th Edition. The C.V. Mosby Co. St. Louis,