Technical Information

Hugh Leifson MiVeg Medium

Product Code : VM1826

Application:- Hugh Leifson MiVeg Medium is used to distinguish between aerobic and anaerobic breakdown of carbohydrate (glucose).

Composition

Ingredients	Gms / Litre
MiVeg peptone	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

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Hugh Leifson MiVeg Medium is prepared by using MiVeg peptone in place of peptic digest of animal tissue thus making the medium free from BSE/TSE risks. Hugh Leifson MiVeg Medium is the modification of medium devised by Hugh and Leifson (1). They described the taxonomic significance of fermentative and oxidative metabolism of carbohydrates in gram-negative intestinal bacteria.

High concentration of carbohydrate and low concentration of MiVeg peptone in the medium minimize the possibility of utilizing aerobes to produce an alkaline condition which would neutralize slight acidity produced by an oxidative organism (2,3). Dipotassium phosphate promotes fermentation and acts as pH controlling buffer. Agar concentration enables the motility determination and aids in distribution of acid throughout the tube. 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. Dextrose is the most important carbohydrate used in this medium.

Methodology

Suspend 19.4 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Dispense in 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.

Quality Control

Physical Appearance

Greenish yellow coloured, homogeneous, free flowing powder.

Gelling

Semisolid, comparable with 0.2% Agar gel.

Colour and Clarity of prepared medium

Greenish blue coloured, clear to slightly opalescent semisolid gel forms in tubes as butts.

Reaction

Reaction of 1.94% w/v aqueous solution is pH 6.8 ± 0.2 at 25°C.

pH Range

6.6-7.0

Cultural Response/Characteristics

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

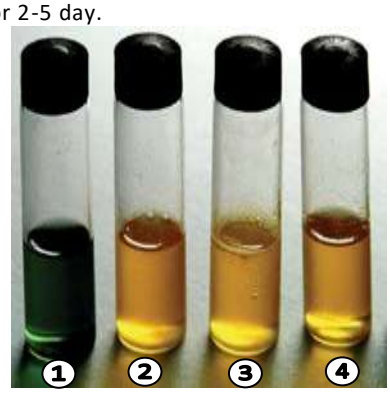
Organisms (ATCC)	Sealed (with oil/paraffin)	Unsealed	Motility
Enterobacter aerogenes (13048)	AG	AG	+
Escherichia coli (25922)	AG	AG	+
Pseudomonas aeruginosa (27853)	_	AG	+
Salmonella serotype Typhi (6539)	AG	AG	+
Shigella sonnei (25931)	A	AG	_

Key : A = acid production (yellow colour)
G = gas production
- = no change in colour (green) or alkaline reaction (blue)

Motility: + = growth away from the stab line (motile)
- = growth along the stab line (non-motile)

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 day.



VM1826 Hugh Leifson MiVeg Medium (Unsealed)

1. Control
2. *Enterobacter aerogenes*
3. *Escherichia coli*
4. *Shigella sonnei*

Further Reading

1. Shirling E.B. and Gotlieb D., 1966, International J. Systemic Bact, 16 : 3.
1. Hugh and Leifson, 1953, J. Bact., 66:24.
2. MacFaddin J.F., 1985 (ed), Cultivation-Identification-Maintenance of Medical Bacteria, Vol I, William and Wilkins, Baltimore.
3. Finegold S.M. Martin W.J. and Scott E.G., 1978, Bailey and Scott's DiagnosticMicrobiology, 5th ed., The C.V. Mosby Co., St. Louis.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for in fingement of any patents.Do not use the products if it fails to meet specificatons for identity and performens parameters.