Hugh Leifson HiVeg™ Medium MV826

Hugh Leifson HiVeg Medium is used to distinguish between anaerobic and aerobic breakdown of carbohydrate (glucose).

Composition** :

Ingredients	Grams/Litre
HiVeg 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

Directions :

Suspend 19.4 grams in 1000 ml distilled water. 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.

Principle and Interpretation :

Hugh Leifson HiVeg Medium is prepared by replacing Peptic digest of animal tissue with HiVeg peptone which makes the medium free of BSE/TSE risks. Hugh Leifson HiVeg Medium is the modification of medium formulated by Hugh and Leifson (1). They described the taxonomic significance of fermentative and oxidative metabolism of carbohydrates by gram-negative intestinal bacteria.
The medium contains a high concentration of carbohydrate and low concentration of HiVeg peptone to avoid the possibility of an aerobic organism utilizing HiVeg peptone and producing 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 determination of motility 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.

Quality Control :

Appearance of Powder
Greenish yellow coloured, homogeneous, free flowing powder.
Gelling
Semisolid comparable with 0.2% Agar gel.
Colour and Clarity
Greenish blue coloured, clear to slightly opalescent gel forms in tubes as butts.
Reaction
Reaction of 1.94 % w/v aqueous solution is pH 6.8 ± 0.2 at 25°C.

Product Profile :		
Vegetable based (Code MV)◉		**Animal based** (Code M)
MV826 HiVeg peptone		**M826** Peptic digest of animal tissue
Recommended for	:	To distinguish between anaerobic and aerobic breakdown of carbohydrate (glucose).
Reconstitution	:	19.4 g/l
Quantity on preparation (500g)	:	25.77 L
(100g)	:	5.15 L
pH (25°C)	:	6.8 ± 0.2
Supplement	:	None
Sterilization	:	121°C / 15 minutes.
Storage : Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.		

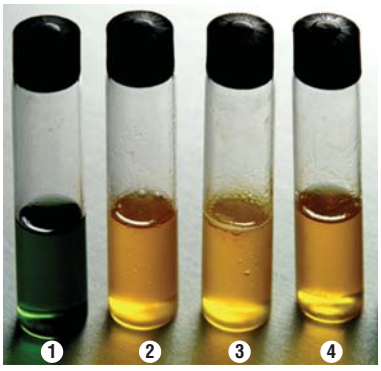
Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

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

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)

References :

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 Diagnostic Microbiology, 5th ed., The C.V. Mosby Co., St. Louis.



MV826 Hugh Leifson HiVeg Medium (Unsealed)
1. Control
2. *Enterobacter aerogenes*
3. *Escherichia coli*
4. *Shigella sonnei*

◉Prepared from GMO free Vegetable proteins replacing Animal based peptones. Freedom from BSE/TSE worries.