APT HiVeg™ Agar / Broth MV226 / MV227

APT HiVeg Agar / Broth is recommended for the cultivation and maintenance of heterofermentative lactic acid bacteria requiring high thiamine.

Composition** :

Ingredients	MV226 Grams/Litre	MV227 Grams/Litre
HiVeg hydrolysate	12.50	12.50
Yeast extract	7.50	7.50
Dextrose	10.00	10.00
Sodium citrate	5.00	5.00
Sodium chloride	5.00	5.00
Dipotassium phosphate	5.00	5.00
Magnesium sulphate	0.80	0.80
Manganese chloride	0.14	0.14
Ferrous sulphate	0.04	0.04
Polysorbate 80	0.20	0.20
Thiamine hydrochloride	0.001	0.001
Agar	15.00	-

Final pH (at 25°C) 6.7±0.2
** Formula adjusted, standardized to suit performance parameters

Directions :

Suspend 61.2 grams of MV226 or 46.2 grams of MV227 in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. AVOID EXCESSIVE HEATING.

Principle and Interpretation :

APT HiVeg Media are prepared by using vegetable peptones in place of animal based peptones which makes the media BSE/TSE risk free. APT HiVeg Media are the modification of APT (All purpose Tween 80) Media which are formulated as per Evans and Niven (1) for cultivation and maintenance of *Lactobacillus viridescens* ATCC 12706 used in the microbiological assay of thiamine. APT HiVeg Agar can also be used for cultivation of heterofermentative *Lactobacilli*, lactic *Streptococci* that cause greening of meat and meat products (2). This medium is also suitable for microbiological examination of cured meats, sauerkraut, fruit juices and meat products.
Although these media were devised for *Lactobacilli*, it is rich due to nutrients like HiVeg hydrolysate, yeast extract, dextrose, polysorbate 80 and hence can support growth of commensal microflora including coliform bacteria. Magnesium sulphate, manganese chloride and ferrous sulphate provide essential ions for the multiplication of *Lactobacilli* or lactic *Streptococci*. Polysorbate 80 acts as fatty acid source required by *Lactobacillus*.

Quality Control:

Appearance of Powder :
Light yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

Gelling :
Firm, comparable with 1.5% Agar gel of MV226.

Product Profile :		
Vegetable based (Code MV)◉		**Animal based** (Code M)
MV226/MV227 HiVeg hydrolysate		**M226/M227** Casein enzymic hydrolysate
Recommended for	:	Cultivation and maintenance of heterofermentative lactic acid bacteria requiring high thiamine.
Reconstitution	:	(MV226) : 61.2 g/l
		(MV227) : 46.2 g/l
Quantity on preparation (500g)	:	(MV226) : 8.16 L
	:	(MV227) : 10.82 L
pH (25°C)	:	6.7 ± 0.2
Supplement	:	None
Sterilization	:	121°C / 15 minutes.
Storage : Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.		

Colour and Clarity :
Yellow coloured clear to slightly opalescent gel forms in petri plates, clear solution in tubes.

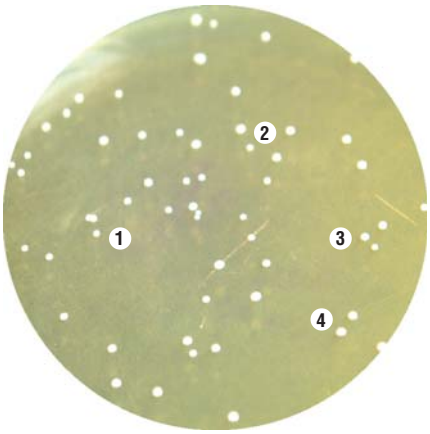
Reaction :
Reaction of 6.12% w/v of MV226 and 4.62% w/v of MV227 aqueous solution is pH 6.7 ± 0.2 at 25°C.

Cultural Response :
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
Lactobacillus viridescens (12706)	10^2-10^3	good-luxuriant	>70%
Lactobacillus acidophilus (4356)	10^2-10^3	good-luxuriant	>70%
Leuconostoc mesenteroides (12291)	10^2-10^3	good-luxuriant	>70%
Lactobacillus fermentum (9338)	10^2-10^3	good-luxuriant	>70%
Lactobacillus plantarum (14917)	10^2-10^3	good-luxuriant	>70%
Lactobacillus lactis (19435)	10^2-10^3	good-luxuriant	>70%

References :

1. Evans and Niven, 1951, J. Bact., 62:599.
2. Pederson and Albany, 1955, J. Bact., 70:702.



MV226 APT HiVeg Agar
1. *Lactobacillus acidophilus*
2. *Lactobacillus fermentum*
3. *Lactobacillus plantarum*
4. *Lactobacillus lactis*

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