

Nutrient HiVeg™ Agar with 1% HiVeg™ Peptone / Nutrient HiVeg™ Broth with 1% HiVeg™ Peptone

MV012 / MV244

Nutrient HiVeg medias are recommended as general purpose culture media for nonfastidious organisms and with addition of blood can be used for cultivating fastidious organisms.

Composition ** :

Ingredients	MV012	MV244
	Grams/Litre	Grams/Litre
HiVeg peptone	10.0	10.0
HiVeg extract	5.0	10.0
Sodium chloride	5.0	5.0
Agar	15.0	-

Final pH (at 25°C) 7.4 ± 0.2

** Formula adjusted, standardized to suit performance parameters

Directions :

Suspend 35 grams of MV012 or 25 grams of MV244 in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle and Interpretation :

These media are prepared by completely replacing animal based peptones with vegetable peptones, which makes the media free of BSE/TSE risks. Peptic digest of animal tissue and Beef extract are replaced with plant based HiVeg peptone and HiVeg extract respectively which are nutritionally rich and supply essential nitrogenous compounds and growth factors (1).

Nutrient HiVeg Agar / Broth with 1% HiVeg peptone has almost double concentration of these nitrogen sources making it more nutritive. HiVeg extract and HiVeg peptone provides the necessary nitrogen compounds, carbon, vitamins and also some trace ingredients to the nonfastidious organisms like *Bacillus subtilis* and *Staphylococcus aureus*. Sodium chloride maintains osmotic equilibrium of the medium.

With the addition of 10% v/v blood or other biological fluids like ascitic fluid, serum etc. these media are recommended for growing fastidious organisms.

Nutrient HiVeg Broth with 1% HiVeg peptone can be used as a sterility testing medium for aerobes against Nutrient Broth, (animal based) recommended for microbia limit tests as per standard pharmacopoeia (2).

Quality Control :

Appearance of powder

Light yellow to yellow coloured may have slightly greenish tinge, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel of MV012.

Product Profile :

Vegetable based (Code MV)©	Animal based (Code M)
MV012/MV244 HiVeg peptone HiVeg extract	M012/M244 Peptic digest of animal tissue Beef extract

Recommended for : Use as general purpose culture media for nonfastidious organisms and growth of fastidious organisms on supplementation with blood.

Reconstitution : (MV012) : 35.0 g/l
: (MV244) : 25.0 g/l

Quantity on preparation (500g) : (MV012) : 14.28 L
: (MV244) : 20.0 L

(100g) : (MV012) : 2.85 L

: (MV244) : 4.0 L

pH (25°C) : 7.4 ± 0.2

Supplement : Blood, if desired

Sterilization : 121°C / 15 minutes.

Storage : Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

Colour and Clarity

Light yellow coloured, clear to slightly opalescent gel forms in petri plates, clear solution in tubes. With the addition of blood, cherry red coloured, opaque gel forms in petri plates.

Reaction

Reaction of 3.5% w/v of MV012 or 2.5% w/v of MV244 aqueous solution is pH 7.4 ± 0.2 at 25°C.

Cultural Response

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

Organisms (ATCC)	Inoculum (CFU)	Growth in MV244	Growth* on MV012	Recovery on MV012*	Growth** on MV012	Haemolysis on MV012**
<i>Staphylococcus aureus</i> (25923)	10 ² -10 ³	luxuriant	luxuriant	>70%	luxuriant	beta
<i>Neisseria meningitidis</i> (13090)	10 ² -10 ³	good	good	>50%	luxuriant	none
<i>Streptococcus pneumoniae</i> (6303)	10 ² -10 ³	good	good	>50%	luxuriant	alpha
<i>Streptococcus pyogenes</i> (19615)	10 ² -10 ³	good	good	>50%	luxuriant	beta

Key: * = without blood

** = with blood

References:

- MacFaddin, J. (1985); Methods for Isolation- Cultivation- Identification- Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
- IP: Indian Pharmacopoeia, 1996. Govt. of India 1996. The controller of Publication, Delhi.