

Soyabean HiVeg™ Medium/with 0.1% Agar**MV322/MV323**

Soyabean HiVeg Medium/with 0.1% Agar is recommended for cultivation of anaerobes from root canals, blood and other specimens. With added carbohydrate it can also be used to study fermentation reaction.

Composition ** :

Ingredients	MV322	MV323
	Grams/Litre	Grams/Litre
HiVeg hydrolysate	17.0	17.0
Papaic digest of soyabean meal	3.00	3.0
Sodium chloride	5.00	5.00
Dipotassium phosphate	2.50	2.50
Dextrose	-	2.50
Agar	-	1.00

Final pH (at 25°C) 7.3 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 27.5 grams of MV322 or 31 grams of MV323 in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense as desired and 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 risk. Soyabean HiVeg Medium (MV322) is used as a base for more complex media for the cultivation of various organisms like *Neisseria*, pathogenic *Streptococci* etc. With the addition of carbohydrates it can also be used for fermentation studies of fastidious and non-fastidious organisms. Soyabean HiVeg Medium with 0.1% Agar (MV323) is used for culturing organisms especially anaerobes from root canals, blood and other clinical samples. Inclusion of agar to this medium is useful for isolating anaerobic oral *Vibrios* (1) and also anaerobic organisms causing nasal sinusitis (2).

HiVeg hydrolysate and Papaic digest of soyabean meal supplies nitrogenous and carbonaceous compounds, trace minerals etc. Dextrose serves as a source of fermentable carbohydrate for the energy production in MV323. While in MV322 dextrose is omitted from the formula to permit use of the medium in fermentation studies. The carbohydrate concentration used in fermentation reaction frequently is 0.5% or 1%. Sodium chloride maintains osmotic balance while dipotassium phosphate provides buffering capacity. Small percentage of agar helps in creating moderately anaerobic condition in the depth of the medium.

Product Profile :

Vegetable based (Code MV)Ⓞ		Animal based (Code M)
MV322/MV323	HiVeg hydrolysate	M322/M323 Casein enzymic hydrolysate
Recommended for	:	Cultivation of anaerobes from root canals, blood and other specimens. With added carbohydrate it can also be used to study fermentation reaction.
Reconstitution	:	(MV322) : 27.5 g/l (MV323) : 31.0 g/l
Quantity on preparation (500g)	:	(MV322) : 18.18 L (MV323) : 16.12 L
pH (25°C)	:	7.3 ± 0.2
Supplement	:	None
Sterilization	:	121°C / 15 minutes.
Storage	: Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.	

Quality Control :**Appearance of powder**

Light yellow coloured, homogeneous, free flowing powder.

Colour and Clarity

Yellow coloured, clear solution without any precipitate.

Reaction

Reaction of 2.75% w/v of MV322 or 3.1% w/v of MV323 aqueous solution is pH 7.3 ± 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
<i>Staphylococcus epidermidis</i> (12228)	10 ² -10 ³	good-luxuriant
<i>Streptococcus pneumoniae</i> (6303)	10 ² -10 ³	good-luxuriant
<i>Streptococcus pyogenes</i> (19615)	10 ² -10 ³	good-luxuriant
<i>Clostridium perfringens</i> (12924)*	10 ² -10 ³	good-luxuriant
<i>Bacteroides fragilis</i> (25285)*	10 ² -10 ³	good-luxuriant
<i>Neisseria meningitidis</i> (13090)	10 ² -10 ³	good

Key: * = Incubated anaerobically

References :

- Mashimo and Ellison, 1959, J. Bact., 78:636.
- Fredette, Anger and Forget, 1961, Can. Med. Assoc. J., 84:164.