Brilliant Green HiVeg™ Agar Base, Modified / with 1.2% Agar MV016 / MV016A

Brilliant Green HiVeg Agar Base Modified / with 1.2% Agar is used for selective isolation of *Salmonellae* other than *Salmonella* serotype Typhi from faeces and other materials. It is also recommended for examination of foods and dairy products.

Composition** :

Ingredients	MV016 Grams/Litre	MV016A Grams/Litre
HiVeg peptone No. 3	10.00	10.00
Yeast extract	3.00	3.00
Lactose	10.00	10.00
Sucrose	10.00	10.00
Sodium chloride	5.00	5.00
Phenol red	0.08	0.08
Brilliant green	0.0125	0.0125
Agar	20.00	12.00

Final pH (at 25°C) 6.9 ± 0.2
** Formula adjusted, standardized to suit performance parameters

Directions :

Suspend 58 grams of MV016 or 50 grams of MV016A 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. AVOID OVERHEATING. For more selectivity, aseptically add rehydrated Sulpha Supplement (FD068). Mix well before pouring into sterile petriplates.

Principle and Interpretation :

Brilliant Green HiVeg Media (Modified) are prepared by replacing Proteose peptone (bovine origin) by HiVeg peptone No.3 (vegetable origin) which is free of BSE/TSE risks. Brilliant Green HiVeg Media are the modifications of Brilliant Green Agar / with 1.2% Agar which are used as a primary plating medium for isolation of *Salmonella* species and was first described by Kristensen et al (1) and further modified by Kauffmann (2). These media contain brilliant green which inhibits growth of majority of gram-negative and gram-positive bacteria. *Salmonella* serotype Typhi, *Shigella* species *Escherichia coli, Proteus* species, *Pseudomonas* species, *Staphylococcus aureus* are mostly inhibited. Clinical specimens can be directly plated on this medium.

However, being highly selective, it is recommended that these media should be used alongwith a less inhibitory medium to increase the chances of recovery. Often cultures enriched in Selenite or Tetrathionate HiVeg Broth are plated on Brilliant Green HiVeg Agar along with Bismuth Sulphite HiVeg Agar, SS HiVeg Agar, MacConkey HiVeg Agar.

Phenol red serves as an acid base indicator giving yellow colour to lactose and or sucrose fermenting bacteria. Non-lactose fermenting bacteria develop white to pinkish red colonies within 18 - 24 hours of incubation. *Salmonella* serotype Typhi and *Shigella* species may not grow on these media, moreover *Proteus, Pseudomonas* and *Citrobacter* species may mimic enteric pathogens by producing small red colonies.

Product Profile :

Vegetable based (Code MV)◉	Animal based (Code M)
MV016/MV016A HiVeg peptone No.3	**M016/M016A** Proteose peptone

Recommended for	:	Selective isolation of *Salmonella* species other than *Salmonella* serotype Typhi
Reconstitution	:	(MV016) : 58.0 g/l
	:	(MV016A) : 50.0 g/l
Quantity on preparation (500g)	:	(MV016) : 8.62 L
(100g)	:	(MV016) : 1.72 L
(500g)	:	(MV016A) : 10.0 L
(100g)	:	(MV016A) : 2.0 L
pH (25°C)	:	6.9 ± 0.2
Supplement	:	Sulpha Supplement (FD068)
Sterilization	:	121°C / 15 minutes.

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

Quality Control :

Appearance of Powder
Pink coloured, homogeneous, free flowing powder.

Gelling
Firm, comparable with 2.0% Agar gel for MV016 and 1.2% Agar gel for MV016A.

Colour and Clarity
Greenish brown coloured, clear to slightly opalescent gel forms in petri plates.

Reaction
Reaction of 5.8% w/v of MV016 or 5.0% w/v of MV016A aqueous solution is pH 6.9 ± 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	Colour of Colony
Escherichia coli (25922)	$2x10^2$-10^4	none to poor	<10%	yellowish green
Salmonella serotype Enteritidis (13076)	10^2-10^3	luxuriant	>50%	pinkish white
Salmonella serotype Typhi (6539)	10^2-10^3	poor to good	>30%	reddish pink
Salmonella serotype Typhimurium (14028)	10^2-10^3	luxuriant	>50%	pinkish white
S. aureus (25923)	$2x10^2$-10^4	inhibited	0%	—

References :

1. Kristensen M., Lester V, and Jurgens A., 1925, Brit. J. Exp. Pathol., 6:291.
2. Kauffman F., 1935, Seit F. Hyg. 177:26.

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

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