Kanamycin Esculin Azide HiVeg™ Agar/Broth MV510/MV776

Kanamycin Esculin Azide HiVeg Agar / Broth is used for isolation of *Enterococci* in foodstuffs.

Composition** :

Ingredients	MV510 Grams/Litre	MV776 Grams/Litre
HiVeg hydrolysate	20.00	20.00
Yeast extract	5.00	5.00
Sodium chloride	5.00	5.00
Sodium citrate	1.00	1.00
Esculin	1.00	1.00
Ferric ammonium citrate	0.50	0.50
Sodium azide	0.15	0.15
Kanamycin sulphate	0.02	0.02
Agar	12.00	—

Final pH (at 25°C) 7.0 ± 0.2
** Formula adjusted, standardized to suit performance parameters

Directions :

Suspend 44.67 grams of MV510 or 32.67 grams of MV776 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.
Warning: Sodium azide has a tendency to form explosive metal azides with plumbing materials. It is advisable to use enough water to flush off the disposables.

Principle and Interpretation :

Kanamycin Esculin Azide HiVeg Media are prepared by using HiVeg hydrolysate which is free of BSE/TSE risks. These media are the modifications of Kanamycin Esculin Azide Medium which is formulated as per Mossel et al (1,2) to detect *Enterococci* in food stuffs. It can be used in the dip slide technique for bacteriological monitoring of foods like the conventional media used by Mossel et al (3).
HiVeg hydrolysate, yeast extract provides essential nutrients for *Enterococci*. Kanamycin sulphate and sodium azide are the selective inhibitory components. Esculin and ferric ammonium citrate together form the indicator system to detect esculin - hydrolysing *Enterococci* forming black zones around the colonies. Mossel et al (4) described the following procedure as - 1gm or 1ml mixed food is added to prechilled diluent (Tryptone water , HiVeg MV463) and decimal dilutions are prepared. The decimal dilutions are inoculated in Kanamycin Esculin Azide HiVeg Broth (MV776) and incubated at 35°C for 16 -24 hours. If blackening of medium occurs, streaking is done on agar (MV510) and after incubation confirmatory tests are carried out.

Quality Control:

Appearance of Powder
Light yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.
Gelling
Firm, comparable with 1.2% Agar gel of MV510.
Colour and Clarity
Medium amber coloured, clear to slightly opalescent gel forms in petri plates, clear solution in tubes.

Product Profile :

Vegetable based (Code MV)◉	Animal based (Code M)
MV510/MV776 HiVeg hydrolysate	**M510/M776** Casein enzymic hydrolysate

Recommended for	:	Isolation of *Enterococci* in foodstuffs.
Reconstitution	:	(MV510) : 44.67 g/l
		(MV776) : 32.67 g/l
Quantity on preparation (100g)	:	(MV510) : 2.23 L
(100g)	:	(MV776) : 3.06 L
pH (25°C)	:	7.0 ± 0.2
Supplement	:	None
Sterilization	:	121°C / 15 minutes

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

Reaction

Reaction of 4.47% w/v of MV510 or 3.27% w/v of MV776 aqueous solution is pH 7.0 ± 0.2 at 25°C.

Cultural Response

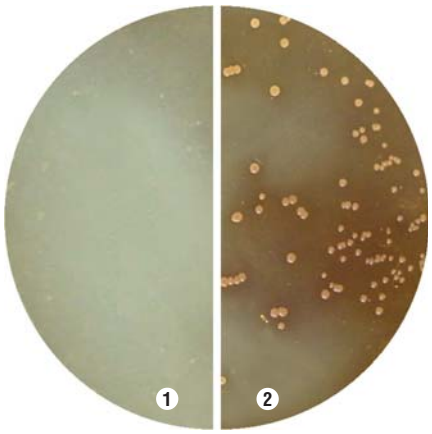
Cultural characteristics observed after an incubation at 35°C or 42°C for 18-24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Esculin hydrolysis
Enterococcus faecium (19434)	10^3-10^5	luxuriant	>70%	+
Enterococcus bovis (27960)	10^3-10^5	luxuriant	>70%	+
Escherichia coli (25922)	10^3-10^5	inhibited	0%	—
Staphylococcus aureus (25923)	10^3-10^5	inhibited	0%	—
Enterococcus faecalis (29212)	10^3-10^5	luxuriant	>70%	+

Key : + = blackening of medium / black zone around the colony

References :

1. Mossel D.A.A., Bijker P.G.H. and Eelderink I., 1978, Arch. Lebensmittel - hyg., 29:121.
2. Mossel D.A.A., el al, 1978, In : 'Streptococci.', Skinner F.A. and Quesnel L. B. (Eds.), SAB Symposium, series No.7, Academic Press, London.
3. Mossel D.A.A., et al, 1976, Lab. Practice, 25:393.
4. Mossel D.A.A., Harrenwijn G.A. and Elzebroek B.J.M., 1973, UNICEF, Geneva.



MV510 Kanamycin Esculin Azide HiVeg Agar
1. Control
2. *Enterococcus faecium*

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