Violet Red Glucose HiVeg™ Agar without Lactose / w/Lactose MV581/MV581A

Violet Red Glucose HiVeg Agar without Lactose and with Lactose is used for detection and enumeration of *Enterobacteriaceae* in foods products.

Composition ** :

Ingredients	MV581 Grams/Litre	MV581A Grams/Litre
HiVeg peptone	7.0	7.0
Yeast extract	3.0	3.0
Sodium chloride	5.0	5.0
Synthetic detergent No. I	1.5	1.5
Glucose	10.0	-
Glucose monohydrate	-	9.09
Lactose monohydrate	-	9.5
Neutral red	0.03	0.03
Crystal violet	0.002	0.002
Agar	12.0	15.0

Final pH (at 25°C) 7.4 ± 0.2
** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 38.53 grams of MV581 or 50.12 grams of MV581A in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. If desired medium can be sterilized by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile petriplates

Principle and Interpretation :

These media are prepared by using vegetable peptones in place of animal peptones which makes the medium BSE/ TSE risks free. Voilet Red Glucose HiVeg Agar without Lactose is the modification of the medium formulated by Mossel et al (1,2,3) where glucose was added to improve the recovery of *Enterobacteriaceae*. Violet Red Glucose HiVeg Agar w/Lactose which also has glucose added in it serves the same purpose. These like the conventional media are selective media recommended for detection of all the members of the *Enterobacteriaceae* that can reveal the hygienic conditions in the food processing units at various stages such as raw materials, plant operation and processed foods (1,2). Incubation can be carried out at different temperatures and time depending upon the group of *Enterobacteriaceae* to be recovered (4). HiVeg peptone and yeast extract provide nutrients to the bacteria while glucose and neutral red mixture helps to detect carbohydrate fermentation. Synthetic detergent and crystal violet inhibit growth of gram-positive bacteria. Glucose / Lactose fermenters produce red colonies in the presence of neutral red, a pH indicator.
When these media are used in the pour plate procedure, it should be freshly prepared, tempered to 47°C, and used within 3 hours.

Product Profile :

Vegetable based (Code MV)◉	Animal based (Code M)
MV581/MV581A HiVeg peptone Synthetic detergent No. 1	**M581/M581A** Peptic digest of animal tissue Bile salts mixture

Recommended for	:	Detection and enumeration of *Enterobacteriaceae* in foods products.
Reconstitution	:	(MV581) : 38.5 g/l
	:	(MV581A) : 50.12 g/l
Quantity on preparation (500g)	:	(MV581) : 12.97 L
(500g)	:	(MV581A) : 9.98 L
pH (25°C)	:	7.4 ± 0.2
Supplement	:	None
Sterilization	:	Boiling or 121°C/15 minutes, if desired.

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

Quality Control :

Appearance of powder
Pinkish beige coloured, may have slightly greenish tinge, homogeneous, free flowing powder.
Gelling
Firm, comparable with 1.2% Agar gel of MV581 or 1.5% Agar gel of MV581A.
Colour and Clarity
Reddish purple coloured, clear to slightly opalescent gel forms in petri plates.
Reaction
Reaction of 3.85% w/v of MV581 or 5.01% w/v of MV581A aqueous solution is pH 7.4 ± 0.2 at 25°C.
Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organisms (ATCC)	Inoculum	Growth (CFU)	Recovery	Colour of colony
Enterobacter aerogenes (13048)	10^2-10^3	good-luxuriant	>50%	pink-red
Escherichia coli (25922)	10^2-10^3	good-luxuriant	>50%	pink-red
Salmonella serotype Enteritidis (13076)	10^2-10^3	good-luxuriant	>50%	light pink
Staphylococcus aureus (25923)	10^2-10^3	inhibited	0%	-

References :

1. Mossel D.A.A., Mengerink W.H.J. & Scholts H.H., 1962, J. Bacteriol, 84 : 381.
2. Mossel D.A.A. et al, 1978, Lab. practice, 27 No. 12 : 1049
3. Mossel D.A.A. et al, 1979, Food Protect., 42 : 470.
4. Mossel D.A.A. et al, 1986, J. Appl. Bact., 60 : 289.

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