Gassner Lactose HiVeg™ Agar MV1022

Gassner Lactose HiVeg Agar is used for detection and isolation of pathogenic *Enterobacteriaceae* from food stuffs and other materials.

Composition** :

Ingredients	Grams/Litre
HiVeg peptone No.1	7.00
Sodium chloride	5.00
Lactose	50.00
Metachrome yellow	1.25
Water blue	0.625
Agar	13.00

Final pH (at 25°C) 7.2 ± 0.2
** Formula adjusted, standardized to suit performance parameters

Directions :

Suspend 76.87 grams 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 :

This medium is prepared by replacing animal based Meat peptone by HiVeg peptone No. 1, therefore the medium is free of TSE/BSE risk. Gassner Lactose HiVeg Agar is the modification of Gassner Lactose Agar originally developed by Gassner for the detection and isolation of pathogenic *Enterobacteriaceae* from food and other materials (1). This medium is also known as Water-blue Metachrome-yellow Lactose Agar. Metachrome-yellow primarily inhibits gram-positive microorganisms present in the food materials. Water blue indicator turns blue in acidic range and colourless in alkaline range. Lactose fermenters produce acid and therefore change the colour of the medium. Original colour of the prepared medium is green, but in the acidic pH range it becomes blue-green to blue while at alkaline range the yellow colour of metachrome yellow becomes increasingly apparent.
Medium ingredients like HiVeg peptone No. 1 and sodium chloride provides nutrients and maintains osmotic balance respectively. Metachrome yellow and water blue are the pH indicator dyes.

Quality Control :

Appearance of Powder
Greenish yellow, homogeneous, free flowing powder.
Gelling
Firm, comparable with 1.3% Agar gel.
Colour and Clarity
Dark green coloured, clear to slightly opalescent gel forms in petri plates.
Reaction
Reaction of 7.69% w/v aqueous solution is pH 7.2 ± 0.2 at 25°C.

Product Profile :		
Vegetable based (Code MV)◉		**Animal based** (Code M)
MV1022 HiVeg peptone No. 1		**M1022** Meat peptone
Recommended for	:	Detection and isolation of pathogenic *Enterobacteriaecae* from food stuffs and other materials.
Reconstitution	:	76.87 g/l
Quantity on preparation (500g)	:	6.5 L
pH (25°C)	:	7.2 ± 0.2
Supplement	:	None
Sterilization	:	121°C / 15 minutes.
Storage : Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.		

Cultural Response

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

Organisms	Inoculum	Growth	Recovery	Colour of Colony*	Colour change of medium
Enterococcus faecalis (29212)	10^2-10^3	inhibited	0%	—	—
Escherichia coli (25922)	10^2-10^3	good -luxuriant	>70%	dark green	blue
Klebsiella pneumoniae (13883)	10^2-10^3	good -luxuriant	>70%	mucoid green	blue
Proteus mirabilis (25933)	10^2-10^3	good -luxuriant	>70%	yellowish green	yellow
Salmonella serotype Typhi (6539)	10^2-10^3	good -luxuriant	>70%	yellow	yellow
Salmonella serotype Typhimurium (14028)	10^2-10^3	good -luxuriant	>70%	yellow	yellow
Salmonella serotype Enteritidis (13076)	10^2-10^3	good -luxuriant	>70%	yellow	yellow
Shigella flexneri (12022)	10^2-10^3	good -luxuriant	>70%	yellow	yellow
Staphylococcus aureus (25923)	10^2-10^3	inhibited	0%	—	—

Note: *Lactose nonfermenters show light green to yellow green surrounded by a yellowish zone. Lactose fermenter like *E.coli*, coliform bacteria and others show deep blue colony surrounded by a blue zone. However due to background colour of agar medium, slight variation in observed colour is visualized as interpreted in column above.

References :

1. Gassner G., 1918, Centralbl. F. Bakt. I. Orig., 80:219.

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