

Technical Information

Violet Red Glucose MiVeg Agar without Lactose

Product Code : VM1581

Application:- Violet Red Glucose MiVeg Agar without Lactose is used for detection and enumeration of *Enterobacteriaceae* in foods products.

Composition

Ingredients	Gms / Litre
MiVeg peptone	7.0
Yeast extract	3.0
Sodium chloride	5.0
Synthetic detergent No.1	1.5
Glucose	10.0
Neutral red	0.03
Crystal violet	0.002
Agar	12.0
Final pH (at 25°C)	7.4 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Violet Red Glucose MiVeg Agar without Lactose is prepared by adding vegetable peptones in place of animal peptones which makes the medium BSE/ TSE risks free. Violet Red Glucose MiVeg 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*. Like the conventional medium this medium can be used as a selective medium to detect members of the *Enterobacteriaceae* family 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 done at different temperatures and time depending upon the group of *Enterobacteriaceae* to be recovered (4). MiVeg peptone and yeast extract supplies essential growth nutrients to the bacteria. Glucose is the fermentable carbohydrates helps to detect carbohydrate fermentation. Synthetic detergent and crystal violet inhibits gram-positive bacteria. Glucose / Lactose fermenters produce red coloured colonies in the presence of neutral red, a pH indicator. Fresh medium should be prepared if the medium is, to be used for pour plating, tempered to 47°C, and used within 3 hours.

Methodology

Suspend 38.53 grams of powder media in 1000 ml distilled water. Mix thoroughly and 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 before pouring into sterile petriplates.

Quality Control

Physical Appearance

Pinkish beige coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.2% Agar gel.

Colour and Clarity of prepared medium

Reddish purple coloured, clear to slightly opalescent gel forms in petri plates.

Reaction

Reaction of 3.85 % w/v aqueous solution is pH 7.4 ± 0.2 at 25°C.

pH Range

7.2-7.6

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

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

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 day.

Further Reading

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.

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