Technical Information

Lactobacillus MRS MiVeg Agar

Product Code : VM1641

Application:- Lactobacillus MRS MiVeg Agar is recommended for the isolation, cultivation and enumeration of all *Lactobacilli*.

Composition

Ingredients	Gms / Litre
MiVeg peptone No. 3	10.00
MiVeg extract	10.00
Yeast extract	5.00
Dextrose	20.00
Polysorbate 80	1.00
Ammonium citrate	2.00
Sodium acetate	5.00
Magnesium sulphate	0.10
Manganese sulphate	0.05
Dipotassium phosphate	2.00
Agar	12.00
Final pH (at 25°C)	6.5 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Lactobacillus MRS MiVeg Agar is prepared by adding vegetable peptones in place of animal based peptones thus making the medium free from BSE/TSE risks. This medium is the modification of Lactobacillus MRS Agar which is based on the formulation of deMan, Rogosa and Sharpe (1) with slight modification. Like conventional media this medium supports luxuriant growth of all *Lactobacilli* from oral cavity (1), dairy products (2), foods (3), faeces (4) and other sources (5). MiVeg peptone No. 3 and MiVeg extract provides nitrogenous and carbonaceous compounds required for the growth of the organisms. Yeast extract provides vitamin B complex and dextrose is the fermentable carbohydrate and serve as an energy source. Polysorbate 80 supplies fatty acids needed for the metabolism of *Lactobacilli*. Sodium acetate andammonium citrate inhibit *Streptococci,* moulds and many other microorganisms. Magnesium sulphate, Manganese sulphate supplies essential ions for the multiplication of *Lactobacilli*. Phosphate act as a buffering system of the medium.

Methodology

Suspend 67.15 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Dispense as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

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

Gelling

Firm, comparable with 1.2% Agar gel.

Colour and Clarity of prepared medium

Medium amber coloured, clear to slightly opalescent gel forms in petri plates.

Reaction

Reaction of 6.71% w/v aqueous solution is pH 6.5 ± 0.2 at 25°C.

pH Range

6.3-6.7

Cultural Response/Characteristics

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

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
Lactobacillus fermentum (9338)	10^2-10^3	luxuriant	>70%
Lactobacillus leichmannii (7830)	10^2-10^3	luxuriant	>70%
Lactobacillus plantarum (8014)	10^2-10^3	luxuriant	>70%

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: 2-8^0 in sealable plastic bags for 2-5 day.

Further Reading

1. deMan J., Rogosa M. and Sharpe M., 1960, J. Appl. Bacteriol., 23:130.
2. Standard Methods for the Examination of Dairy Products. 17th Edition, 2004 Edited by H. Michael Wehr and Joseph H.Frank.
3. Frances Pouch Downes and Keith Ito (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.
4. Sabine and Vaselekos, 1965, Nature, 206:960.
5. MacFaddin J., 2000, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, 3rd edition, Williams and Wilkins, Baltimore.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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