Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Lactic MiVeg Agar

Product Code : VM1599

Application:- Lactic MiVeg Agar is recommended for enumeration and identification of lactic Streptococci and Lactobacilli by pour plate technique.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	22.5
Yeast extract	5.0
Dextrose	5.0
Lactose	5.0
Sucrose	5.0
Sodium chloride	4.0
Sodium acetate	1.5
Ascorbic acid	0.5
Agar	15.0

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Lactic MiVeg Agar is prepared by adding vegetable peptones in place of animal based peptones thereby making the medium BSE/TSE risks free. Lactic Agar was developed as described by Elliker et al (1) and recommended by APHA (2) for cultivation of lactic bacteria to promote the colony development of *Lactobacilli* and lactic *Streptococci.* Lactic acid bacteria are fastidious in nature hence, Lactic MissVeg Agar is designed such, so that it can satisfy their growth requirement. Lactic acid bacteria survive at low pH, but are very sensitive to other adverse conditions. Samples to be examined for enumeration of viable lactic acid bacteria should not be frozen prior to analysis and are analyzed by pour plate method. Many of the lactic acid bacteria are easily killed or injured by freezing. 0.1% Peptone MiVeg Water (VM1028) is used as the diluent since it protects bacteria during the dilution process (3).

MiVeg hydrolysate and yeast extract supply amino acids, other nitrogenous nutrients, vitamin B complex etc. Dextrose, lactose and sucrose are the fermentable carbohydrates. Ascorbic acid provides vitamin C. Sodium chloride maintains the osmotic equilibrium of the medium. Sodium acetate inhibits contaminating bacteria and restricts the swarming of lactic acid bacteria. After incubation, the colonies are examined for gram staining and catalase production. Gram-positive, catalase-negative cocci or rods are tentatively considered to be lactic acid bacteria (2).

Methodology

Suspend 63.5 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well before pouring into sterile petri plates.

Quality Control

Physical Appearance

Cream to yellow coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent gel forms in petri plates.

Cultural Response/Characteristics

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

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
Lactobacillus bulgaricus ATCC 11842	50-100	good-luxuriant	>=70%
Lactobacillus casei ATCC 9595	50-100	good-luxuriant	>=70%
Streptococcus cremoris ATCC 19527	50-100	good-luxuriant	>=70%
Streptococcus thermophilus ATCC 14486	50-100	good-luxuriant	>=70%
Lactobacillus lactis ATCC 8000	50-100	good-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.Elliker P. R., Anderson A. W. and Hanesson G., 1956, J. Dairy Science, 39:1611.
2.Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
3.Hartman P. A., and Huntsberger D. V., 1961, Appl. Microbiol., 9-324. Jayne-Williams D. J., 1963, J. Appl. Bacteriol., 26:398

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