Technical Information

Skim Milk MiVeg Agar

Product Code : VM1763

Application:- Skim Milk MiVeg Agar is used for the cultivation and enumeration of microorganisms encountered in dairy industry.

Composition

Ingredients	Gms / Litre
Skim milk powder	28.0
MiVeg hydrolysate	5.0
Yeast extract	2.5
Dextrose	1.0
Agar	15.0
Final pH (at 25°C)	7.0 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Skim Milk MiVeg Agar is prepared by adding vegetables peptones in place of animal based peptones thus making the medium free from BSE/TSE risks. This medium is the modification of the medium recommended by APHA (1) for cultivation and enumeration of microorganisms encountered in diary industry (2). Like conventional medium this medium can be used for the
demonstration of coagulation and proteolysis of casein (3). Skim Milk is sometimes used as a complete medium or as an ingredient in other medias for multiplication of the microorganisms present in contaminated milk products like *Mycobacterium tuberculosis, Corynebacterium diptheriae* etc. Proteolytic bacteria hydrolyze casein to form soluble nitrogenous compounds indicated as clear zones surrounding the colonies.
MiVeg hydrolysate and yeast extract supplies all the essential nitrogenous nutrients, carbon, sulphur, vitamin B complex and trace elements to the growing organisms. Dextrose act as a carbohydrate source in the medium. Skim milk serves as a good source of casein.

Methodology

Suspend 51.5 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

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

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Off white coloured, opaque gel forms in petri plates.

Reaction

Reaction of 5.15% w/v aqueous solution is pH 7.0 ± 0.2 at 25°C.

pH Range

6.8-7.2

Cultural Response/Characteristics

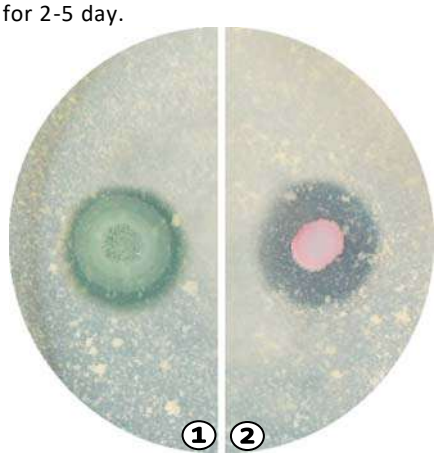
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Proteolytic activity	Recovery
Bacillus subtilis (6633)	10^2-10^3	luxuriant	+	>70%
Enterococcus faecalis (25212)	10^2-10^3	luxuriant	-	>70%
Escherichia coli (25922)	10^2-10^3	luxuriant	-	>70%
Proteus mirabilis (25933)	10^2-10^3	luxuriant	+	>70%
Pseudomonas aeruginosa (27853)	10^2-10^3	luxuriant	+	>70%
Serratia marcescens (8100)	10^2-10^3	luxuriant	+	>70%

Key : + = clearance around colony.

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.



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1. *Pseudomonas aeruginosa*
2. *Serratia marcescens*

Further Reading

1. Vanderzant C. and Splittstoesser D. (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd ed., APHA, Washington, D.C.
2. Marshall R (Ed.) Standard Methods for the Examination of Dairy Products 16th Edition, 1992.
3. Frazier W.C. and Ripp P., 1928, J. Bact., 16 : 57.

Disclaimer :

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