Technical Information

Modified Skim Milk MiVeg Agar

Product Code : VM2213

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

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	5.000
Yeast extract	2.500
Glucose monohydrate	1.000
Skim milk powder	1.000
Agar	15.000
Final pH (at 25°C)	7.0±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Modified Skim Milk MiVeg Agar is prepared by using vegetable peptones in place of animal based peptones which makes it free from BSE/TSE risk. It is formulated as per APHA (1) for cultivation and enumeration of microorganisms encountered in dairy industry.

This medium is rich in nutrients which facilitate luxuriant growth of organisms. To enumerate organisms from milk and milk products,the inoculated agar plates are incubated at 30°C. Seeded plates are incubated at 6.5°C to isolate and enumerate psychrotrophic microorganisms from milk. Psychrotrophic organisms can grow at temperature below 7°C, although their optimal growth temperature may be in the range of 20-30°C (2).

Methodology

Suspend 24.5 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Quality Control

Physical Appearance

Cream to yellow 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

Reaction

Reaction of 2.45 % w/v aqueous solution pH: 7.0 ±0.2 at 25°C

pH range

6.80-7.20

Cultural Response/Characteristics

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

Organisms (ATCC)	Inoculum (CFU)	Growth(30°C)	Recovery(30°C)	Growth(6.5°C)	Recovery(6.5°C)
Bacillus subtilis ATCC 6633	50-100	luxuriant	>=70%	luxuriant	>=70%
Clostridium perfringens ATCC 12924	50-100	luxuriant	>=70%	luxuriant	>=70%

Escherichia coli ATCC 25922	50-100	luxuriant	>=70%	luxuriant	>=70%
Lactobacillus casei ATCC 9595	50-100	luxuriant	>=70%	inhibited	0%
Pseudomonas aeruginosa ATCC 27853	50-100	luxuriant	>=70%	inhibited	0%
Staphylococcus aureus ATCC 25923	50-100	luxuriant	>=70%	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: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1.Vanderzant C. and Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed, APHA,Washington, D.C.
2.Marshall R. (Ed.), 1992, Standard Methods for the Examination of Dairy Products, 16th Ed., APHA, Washington, D.C.

Disclaimer :

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