

PRODUCT SPECIFICATION SHEET



Skim Milk (DM361)

Intended Use

Skim Milk (DM361) is recommended for cultivation of dairy organisms and differentiation of *Clostridium* species.

Product Summary and Explanation

Skim Milk is soluble, spray-dried skim milk. When prepared in a 10% solution, it is equivalent to fresh skim milk. Skim Milk can be used to prepare Skim Milk Agar which is used for the demonstration of coagulation and proteolysis of casein.⁽¹⁾ The medium is recommended by APHA⁽²⁾ for cultivation and enumeration of microorganisms encountered in dairy industry.⁽³⁾ Addition of skim milk to any nutrient-rich medium creates favourable conditions for growth of organisms, which are encountered in milk. The number of bacteria isolated thus is more than the number of organisms isolated on a regular medium.⁽⁴⁾

Principles of the Procedure

Skim Milk contains casein enzymic hydrolysate provides amino acids and other complex nitrogenous substances. The proteolytic organisms hydrolyse the casein and form a clear solution with the precipitated casein at the bottom of the tube.

Formula / Liter

Ingredients	Gms / Liter
Skim milk powder	100.00
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions

1. Suspend 100 grams in a little amount of distilled water to make a smooth paste. Gradually add more distilled water to make a final volume of 1000 ml. Dispense and sterilize by autoclaving at 15 lbs pressure (121°C) for 5 minutes.
2. Dispense and sterilize by autoclaving at 15 lbs pressure (121°C) for 5 minutes.

Quality Control Specifications

Dehydrated Appearance	White to cream homogeneous free flowing powder
Prepared Medium	Off white coloured opaque solution in tubes
Gel Strength	Not applicable

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

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Proteolytic activity
1.	<i>Bacillus subtilis</i> ATCC 6633	50 - 100	good-luxuriant	positive reaction
2.	<i>Enterococcus faecalis</i> ATCC 29212	50 - 100	luxuriant	negative reaction
3.	<i>Escherichia coli</i> ATCC 25922	50 - 100	good-luxuriant	negative reaction
4.	<i>Proteus mirabilis</i> ATCC 25933	50 - 100	luxuriant	positive reaction
5.	<i>Pseudomonas aeruginosa</i> ATCC 27853	50 - 100	luxuriant	positive reaction
6.	<i>Serratia marcescens</i> ATCC 8100	50 - 100	luxuriant	positive reaction
7.	<i>Clostridium perfringens</i> ATCC 12924	50 - 100	luxuriant	positive reaction

The organisms listed are the minimum that should be used for quality control testing.



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Test Procedure

Refer to appropriate references for specific procedures using Skim Milk.

Results

Proteolytic bacteria hydrolyze casein to form hydrolyse the casein and form a clear solution with the precipitated casein at the bottom of the tube.

Refer to appropriate references and procedures for interpretation results.

Storage

Store the sealed bottle containing the dehydrated medium at 2 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

Skim Milk supports the growth of many microorganisms. Perform microscopic examination and other biochemical tests to identify isolates to the genus and species level.

Packaging

Product Name : Skim Milk

Product Code : DM361

Available Pack sizes : 500gm

References

1. Frazier W. C. and Ripp P., 1928, J. Bacteriol., 16: 57.
2. Terplan G. Rundfeldt, H.u. Zaadhof, K.J. Zur Eignung verschiedener Nährböden für die Bestimmung der Gesamtkeimzahlder Milch. - Arch. Lebensmittelhyg., 18; 9-11 (1967).

Further Information

For further information please contact your local MICROMASTER Representative.



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