

Skim Milk Plate Count Agar, Granulated

GM1623

Skim Milk Plate Count Agar, granulated is recommended for determining the microbial count in milk and dairy products.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	5.000
Yeast extract	2.500
Skim milk powder	1.000
Glucose	1.000
Agar	10.500
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 20 grams in 1000 ml distilled water. Allow it to stand for about 15 minutes, place in a cold water bath and heat gently with frequent shaking to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Skim Milk Plate Count Agar complies with the recommendation of the International Dairy Federation (1, 2) and the DIN Norm 10192 (3) for the examination of milk and dairy products.

Casein enzymic hydrolysate provides amino acids and other complex nitrogenous substances. Yeast extract supplies vitamin B complex. Addition of skim milk in the medium makes the conditions optimal for microorganisms which grow in milk. A wide range of microorganisms can be cultured and enumerated on this medium.

Quality Control

Appearance

Cream to yellow coloured granular medium

Gelling

Firm, comparable with 1.05% Agar gel.

Colour and Clarity of prepared medium

Light yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 2.0% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

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

Organism	Inoculum (CFU)	Growth	Recovery
<i>Staphylococcus aureus</i> ATCC 25923	50-100	luxuriant	>=70%
<i>Lactococcus lactis</i> spp. LactisATCC 19435	50-100	luxuriant	>=70%
<i>Listeria monocytogenes</i> ATCC 19118	50-100	Luxuriant	>=70%
<i>Bacillus cereus</i> ATCC 11778	50-100	luxuriant	>=70%

<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	$\geq 70\%$
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	luxuriant	$\geq 70\%$
<i>Candida albicans</i> ATCC 10231	50-100	luxuriant	$\geq 70\%$

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. DIN Deutsches Institut für Normung e.V.: Mikrobiologische Milchuntersuchung; Bestimmung der Keimzahl (Referenzverfahren) - DIN 10192.
2. Internationaler Milchwirtschaftsverband: Milch u. Milchprodukte, Zählung von Mikroorganismen (Koloniezählung bei 30°C) - Internationaler Standard 100 (1991).
3. Internationaler Milchwirtschaftsverband: Flüssige Milch. Zählung von psychotrophen Mikroorganismen (Koloniezählung bei 6,5°C). - Internationaler Standard 101 (1991).

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