Plate count Agar, Special

M1025

Plate count Agar, Special is used for estimation of microbial counts in raw milk and other dairy products as per Netherlands Dairy Association.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	6.130
Yeast extract	3.060
Dextrose	1.230
Agar	30.100
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 40.52 grams in 1000 ml distilled water. 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.

Principle And Interpretation

Plate Count Agar, special is used for the enumeration of viable bacteria in raw milk, milk and other dairy products (1).

Casein enzymic hydrolysate provides amino acids and other complex nitrogenous substances. Yeast extract supplies Vitamin B-complex. Generally pour plate technique is followed. The samples are diluted and appropriate dilutions are placed in Petri plates. Sterile molten agar is added to these plates and plates are rotated gently to ensure uniform mixing of the sample with agar.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 3.01% Agar gel

Colour and Clarity of prepared medium
Light yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 4.05% 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 18-48 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery
Cultural Response			
Bacillus subtilis ATCC 6633	50-100	luxuriant	>=70%
Lactobacillus casei ATCC 9595	50-100	luxuriant	>=70%
Staphylococcus aureus ATCC 25923	50-100	luxuriant	>=70%
Streptococcus pyogenes ATCC 19615	50-100	luxuriant	>=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. Atlas R.M., 1993, Handbook of microbiological Media, CRC Press, Inc..

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