70152 Plate Count Agar (Casein-peptone Dextrose Yeast Agar)

A non-selective medium for the plate count of microorganisms in milk, other dairy products, foods, water and waste water.

Composition:

Ingredients	Grams/Litre
Tryptone	5.0
Yeast extract	2.5
Dextrose	1.0
Agar	9.0
Final pH 7.0 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions :
Suspend 17.5 g in 1 litre of distilled water. Dissolve by bringing to boiling with frequent stirring, mix and distribute into final containers. Sterilize by autoclaving at 121°C for 15 minutes.

Principle and Interpretation:
Plate Count Agar is equivalent to the medium recommended by APHA for the isolation of microorganisms in milk and other dairy products. Tryptone provides amino acids and other complex nitrogenous substances and yeast extract supplies Vitamin B complexes. APHA recommends the pour plate technique. 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. Plate Count Agar is also suitable for determining bacterial count from sterile rooms.

Cultural characteristics after 24 hours at 35°C. The recovery rate is over 70% by an inoculum of 10^3-10^5 cfu/ml.

Organisms (ATCC)	Growth
Escherichia coli (25922)	+++
Bacillus subtilis (6633)	+++
Lactococcus lactis ssp. lactis (19435)	+++
Listeria monocytogenes (19118)	+++
Staphylococcus aureus (25923)	+++
Streptococcus agalactiae (13813)	+++
Lactobacillus acidophilus (4356)	+++

References:

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 14th ed., APHA Inc., Washington, D.C. (1978)
2. E.W. Frampton, et al., Comparison of β-glucuronidase and indole-based direct plating methods for enumeration of unstressed E. coli, J. Food Protect. 53, 933 (1990)

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