PRODUCT DATA SHEET

PLATE COUNT AGAR (STANDARD PLATE AGAR) TM 544

For determination of plate counts of microorganisms in foods and water

Composition

Ingredients	Gms/Ltr.
Agar	15.00
Tryptone	5.00
Yeast extract	2.50
Dextrose	1.00

* Dehydrated powder, hygroscopic in nature, store in a dry place in tightly- sealed containers 25°C and protected from direct Sunlight.

Instructions for Use

Dissolve 23.50gms in 1000ml distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15 psi (121°) for 15 minutes. Cool to 45 - 50°C and pour into sterile Petri plates.

Appearance: Light yellow colour, clear to slightly opalescent gel
pH (at 25°C): 7.0 ± 0.2

Principle

PLATE COUNT AGAR is used for determination of plate counts of microorganisms from samples. This media was formulated and described by **Buchbinder** et al. Plate count agar is also suitable for determining bacterial count. Tryptone provides amino acids and other complex nitrogenous substances and Yeast extract supplies vitamin B complexes for the growth of microorganisms. Dextrose is a source for carbon and energy. Agar is a solidifying agent. APHA recommends the pour plate technique. The samples are diluted and appropriate dilutions are placed in petri plates. Sterile molten medium (cooled at 45°C) is added to these plates and plates are rotated gently to ensure uniform mixing of the sample with the medium.

Interpretation

Cultural characteristics observed after inoculating (10^3CFU/ml), on incubation at 35°C for 24 hours.

Microorganisms	ATCC	Inoculum (CFU/ml)	Recovery rate	Growth
Bacillus subtilis	6633	10^3	>=70%	Luxuriant
Escherichia coli	25922	10^3	>=70%	Luxuriant
Lactobacillus casei	9595	10^3	>=70%	Luxuriant
Staphylococcus aureus	25923	10^3	>=70%	Luxuriant
Streptococcus pyogenes	19615	10^3	>=70%	Luxuriant
Enterococcus faecalis	29212	10^3	>=70%	Luxuriant

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 ß-glucuronidase and indole-based direct plating methods for enumeration of unstressed E. coli, (1990). J. Food Protect. 53,933.