Technical Information

Plate Count Agar with Tween 80 and Lecithin

Product Code: DM 1302

Application: Plate Count Agar with Tween 80 and Lecithin is used for sanitary examination of surfaces, that is, for counts before and after application of disinfectants.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	5.000
Yeast extract	2.500
Dextrose	1.000
Lecithin	0.700
Polysorbate 80 (Tween 80)	5.000
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Standard Methods Agar with Tween 80 and Lecithin is formulated according to APHA [1] for the enumeration of microorganisms from flat and nonporous surfaces. For this purpose the medium plates should be prepared carefully to ensure the presence of meniscus of agar extending above the top of the poured plate.

Casein enzymic hydrolysate provides amino acids while yeast extract supplies vitamin B complex and dextrose gives energy to microorganisms. Polysorbate 80 and lecithin act as neutralizers to inactivate the residual disinfectants from samples under test [2, 3]. Lecithin inactivates quaternary ammonium compounds whereas polysorbate 80 neutralizes formalin, phenolic disinfectants, hexachlorophene etc.

Methodology

Suspend 29.2 grams of powder media in 1000 ml distilled water. Shake well & heat 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.

Quality Control

Physical Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

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

Reaction
Reaction of 2.92% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH range 6.80-7.20

Cultural Response/Characteristics
DM 1302: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Escherichia coli ATCC 25922	50-100	good-luxuriant	>=70%
Staphylococcus aureus ATCC 25923	50-100	good-luxuriant	>=70%

Storage and Shelf Life

Dried media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1. Richardson S. D. (Ed.), 1985, Standard Methods for the Examination of Dairy Products, 15th ed., APHA, Washington, D.C.
2. Erlandson A. L. and Lawrence C. A., 1953, Science, 118:274.
3. Brummer B., 1976, Appl. Environ. Microbiol., 32:80.

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