



PRODUCT SPECIFICATION SHEET

Standard Methods Agar w/Tween 80 and Lecithin (Plate Count Agar w/Tween 80 and Lecithin) (DM452)

Intended Use

Standard Methods Agar w/Tween 80 and Lecithin (Plate Count Agar w/Tween 80 and Lecithin) (DM452) is recommended for sanitary examination of surfaces and for counts before and after treatment with disinfectants.

Product Summary and Explanation

Standard Methods Agar with the neutralizers, lecithin and polysorbate 80, is formulated according to recommendations of the American Public Health Association for the enumeration of microorganisms from flat and nonporous surfaces.⁽¹⁾ It is primarily used in RODAC^(1,2) (Replicate Organism Detection and Counting) and contact plates for the enumeration of microorganisms on flat impervious surfaces. For this purpose the plates must be prepared carefully to ensure the presence of a meniscus of agar extending above the top of the poured plate. Approximately 17.0 mL of sterile medium per RODAC or contact plate is required. The presence and number of microorganisms on a surface is determined by the appearance of colonies on the surface of the medium following application to the test surface. Collection of "samples" from identical areas before and after treatment with disinfectant yields data useful in evaluating cleaning procedures in environmental sanitation.

Principles of the Procedure

Standard Methods Agar with Tween 80 and Lecithin contains casein enzymic hydrolysate provides nitrogenous compounds, including essential amino acids for the replication of microorganisms. Yeast extract is a rich source of B-complex vitamins. Dextrose is an energy source. Polysorbate 80 and lecithin act as neutralizers to inactivate the residual disinfectants where the samples are collected. Lecithin is incorporated to neutralize quaternary ammonium compounds, and polysorbate 80 is used to neutralize substituted phenolic disinfectants, hexachlorophene etc.⁽³⁻⁵⁾

Formula / Liter

Ingredients	Gms / Liter
Casein enzymic hydrolysate	5.00
Yeast extract	2.50
Dextrose	1.00
Lecithin	0.70
Polysorbate 80 (Tween 80)	5.00
Agar	15.00
Final pH: 7.0 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions

1. Suspend 29.2 grams of the medium in one liter of distilled water.
2. Heat to boiling, to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Mix well and pour into sterile petri plates.





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Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Light yellow coloured clear to slightly opalescent gel forms in Petri plates
Reaction of 2.92% solution	pH 7.0 \pm 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

Expected Cultural Response: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Recovery
1.	<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant	\geq 70%
2.	<i>Staphylococcus aureus</i> ATCC 25923	50-100	good-luxuriant	\geq 70%

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

1. Liquefy the tubed medium in boiling water.
2. Cool to 45-50°C and carefully pour in sterile RODAC plates.
3. The agar in these plates after hardening should form a meniscus above the sides of the plates.
4. For use in the sampling of surfaces, remove the top of the plate.
5. Apply the agar surface to a flat surface, pressing down gently but firmly and making certain that the entire agar meniscus touches the surface.
6. Use a rolling uniform pressure on the back of the plate to effect contact.
7. Lift the plate straight up from the surface, being careful not to allow it to slide along the surface. Replace the top of the plate.
8. Incubate plates with the agar sideup at 32°C for 24-48 hours depending upon whether contamination is heavy or light.
9. Refer to appropriate references for standard test procedures.

Results

1. After incubation, count the colonies and record as either number of colonies per RODAC plate or number of colonies per cm.
2. Subculture those colonies which are of interest so that positive identification can be made by means of biochemical testing and/or microscopic examination of organism smears.
3. Refer to appropriate references and standard test procedures for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.





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Packaging

Product Name : Standard Methods Agar w/Tween 80 and Lecithin (Plate Count Agar w/Tween 80 and Lecithin)

Product Code : DM452

Available Pack sizes : 100gm / 500gm

References

1. Downes and Ito (ed.). 2001. Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.
2. Wehr and Frank (ed.). 2004. Standard methods for the examination of dairy products, 17th ed. American Public Health Association, Washington, D.C.
3. McGowan. 1985. *In* Lennette, Balows, Hausler and Shadomy (ed.), Manual of clinical microbiology, 4th ed. American Society for Microbiology, Washington, D.C.
4. Quisno, Gibby and Foter. 1946. Am. J. Pharm. 118:320.
5. Erlandson and Lawrence. 1953. Science 118:274.

Further Information

For further information please contact your local MICROMASTER Representative.



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