

PRODUCT SPECIFICATION SHEET

Plate Count Agar Plate (pack of 10) (RP014)

Intended Use

Plate Count Agar Plate (pack of 10) (RP014) is a medium recommended for the total bacterial count in food, water and other specimens.

Product Summary and Explanation

Plate Count Agar is equivalent to the medium recommended by APHA for the isolation of microorganisms in milk and other dairy products.⁽¹⁾ The APHA suggests the pour-plate method using diluted samples, and counting colonies after incubation. Sterile molten agar is added to these plates and plates are rotated gently to ensure uniform mixing of the sample with agar. Incubation is for 48 hours at 32°C or at 35°C for the Standard Plate Count. For the enumeration of micro-organisms with other temperature requirements, plates may also be incubated for 7-10 days at 5-7°C; for 3-5 days at 20°C; for 2-3 days at 45°C; or for 48 hours at 55°C. Plate Count Agar is also used for the estimation of the number of live heterotrophic bacteria in water. Plate Count Agar is also suitable for enumerating bacterial count of sterile rooms.

Principles of the Procedure

Plate Count Agar contains casein enzymatic hydrolysate and yeast extract which provides carbon and nitrogen sources and vitamin B complex required for growth of a wide variety of organisms. Dextrose is a source of fermentable carbohydrate and energy source.

Formula / Liter

Ingredients	Gms / Litre
Casein enzymic hydrolysate	5.00
Yeast Extract	2.50
Dextrose	1.00
Agar	9.00
Final pH: 7.0 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. Prepared plated media are For *in vitro* Diagnostic Use or For Laboratory Use as labeled.
2. Directions for use should be read and followed carefully.
3. If excessive moisture is observed, invert the bottom over an off-set lid and allow to air dry in order to prevent formation of a seal between the top and bottom of the plate during incubation.
4. Observe aseptic techniques and established precautions against microbiological hazards throughout all procedures, since it must be assumed that all specimens/samples collected might contain infectious microorganisms.

Product Deterioration

Do not use plates if they show evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

Directions

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

Quality Control Specifications

Appearance	Sterile Plate Count Agar in 90mm disposable plates
Colour	Light yellow coloured medium
Reaction	6.80- 7.20
Quantity of medium	25ml of medium in disposable plate

Sterility Check: Passes release criteria.



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Expected Cultural Response: Cultural characteristics observed after incubation at 35-37°C for 18-24 hours.

Sr. No.	Organisms	Results to be achieved
		Growth
1.	<i>Escherichia coli</i> ATCC 25922	good-luxuriant
2.	<i>Bacillus subtilis</i> ATCC 6633	good-luxuriant
3.	<i>Enterococcus faecalis</i> ATCC 29212	good-luxuriant
4.	<i>Lactobacillus casei</i> ATCC 9595	good-luxuriant
5.	<i>Staphylococcus aureus</i> ATCC 25923	good-luxuriant
6.	<i>Streptococcus pyogenes</i> ATCC 19615	good-luxuriant

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

Test Procedure

Refer appropriate references for standard test procedures.

Results

Refer appropriate references and procedures for interpretation of results.

Storage

On receipt, store plates at 15-25°C. Freezing and overheating must be avoided. Allow the medium to warm to room temperature before inoculation. Media containing dyes should be protected from light.

Expiration

Refer to the expiration date stamped on the pack. Prepared plates stored in their original sleeve wrapping at 2-8°C until just prior to use may be inoculated up to the expiration date and incubated for recommended incubation times, including up to 6 weeks for mycology media and up to 8 weeks for mycobacteriology media.

Product Disposal

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

Limitations of the Procedure

1. Some diagnostic tests may be performed with the primary plate. However, a pure culture is recommended for the majority of biochemical tests and other identification procedures.
2. Consult appropriate references for further information.

Packaging

Product Name : Plate Count Agar Plate

Product Code : RPO14

Available Pack sizes : Pack of 10 plates

References

1. American Public Health Association, 1978, Standard Methods for the Examination of Dairy Products, 14th ed., APHA Inc. Washington, D.C.
2. Marshall, R. T.(ed.). 1993. Standard methods for the microbiological examination of dairy products, 16th ed. APHA, Washington, D.C.
3. Cunniff, P. (ed.). 1995. Official methods of analysis AOAC International, 16th ed. AOAC International, Arlington, VA.
4. Vanderzant, C., and D. F. Splittstoesser (eds.). 1992. Compendium of methods for the microbiological examination of foods, 3rd ed. American Public Health Association, Washington, D.C.
5. Greenberg, A. E., L. S. Clesceri, and A. D. Eaton (eds.). 1992. Standard methods for the examination of water and wastewater, 18th ed. American Public Health Association, Washington, D.C.
6. U.S. Food and Drug Administration. 1995. Bacteriological analytical manual, 8th ed., AOAC International, Gaithersburg, MD.

Further Information

For further information please contact your local MICROMASTER Representative.

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