Plate Count Agar Plate (Gamma-Irradiated)

Intended Use
Plate Count Agar Plate is used for obtaining microbial plate counts from milk, dairy products, food, water and other materials of sanitary importance.

Summary
Plate Count Agar is equivalent to the medium recommended by APHA and ISO 4833 for the isolation of microorganisms in milk and other dairy products and may also be used to determine the sanitary quality of foods, water and other materials.

Principle
The presence of an irradiation indicator enables the rapid and easy visual confirmation by the cleanroom operator that the medium is irradiated. Each pack (media and their wrappings) receives an irradiation dose between 23 and 32 kGy to guarantee that no viable contaminants are present.
Casein enzymic hydrolysate provides the amino acids and other complex nitrogenous substances necessary to support bacterial growth. Yeast extract primarily supplies the B-complex vitamins, and dextrose is an energy source.

Formula*

Ingredients	g/L
Casein Enzymic Hydrolysate	5.0
Yeast Extract	2.5
Dextrose	1.0
Agar	15.0

*Adjusted to suit performance parameters.

Additional Material Required
Bacteriology Incubator.

Instructions for use
1. Open the sterile pack and remove Plate Count Agar Plate aseptically.
2. Inoculate/streak the plate and Incubate in inverted position as per standard procedure.

Reading and interpretation
1. After incubation, observe the microbial growth and count the colonies.
2. Interpretation is assured by user.
3. User is responsible to define the action limits as per standard guidelines and alert limits on the basis of trend analysis & other relevant data.

Quality Control
Appearance: Gel with smooth and even surface without any cracks, bubbles and drying or shrinking of media.
Colour of Medium: Light yellow coloured, slightly opalescent gel forms in petriplates.
Quantity of Medium: 29 ± 2 g in 90 mm petriplate.
pH at 25°C±2°C: 7.0 ± 0.2
Gamma Irradiation: The above said product was Gamma Irradiated between 23KGy - 32KGy.
Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP and growth is observed after an incubation at 30°C-35°C for 18-24 hours.
Growth Promoting Properties: The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤ 100 cfu of appropriate microorganism.

Cultural Response:

Organism (ATCC)	Growth
Staphylococcus aureus subsp. *aureus* (6538)	Good
Bacillus spizizenii (6633)	Good
Enterococcus faecalis (29212)	Good
Escherichia coli (8739)	Good

Note: For Good growth - growth obtained on test media should not differ by a factor greater than 2 from calculated value for a standardized inoculum.

Interpretation of Results

For Good growth, growth obtained on test media should not differ by a factor greater than 2 from calculated value for a standardized inoculum.

Storage and Shelf Life

1. Store between 15°C-25°C to avoid water condensation. Condensation can be prevented by avoiding quick temperature shifts and mechanical stress.
2. Under optimal conditions, the medium has a shelf life of 6 months. Use before expiry mentioned on the label.

Reference

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. Greenbreg, Trussell and Clesceri (ed) (1998) *Standard Methods for the Examination of Drinking Water and Waste Water. 20th Ed. APHA, Washington DC.*
3. Eaton, Rice and Baird (ed.). 2005. Standard methods for the examination of water and wastewater, 21st ed., online. American Public Health Association, Washington, D.C.
4. Environment Agency- The Microbiology of Drinking Water 2002
5. European Pharmacopoeia 2002, supplement 4.6.
6. ISO 4833 (2003) Microbiology of food and animal feeing stuffs − Horizontal method for the enumeration of microorganisms − Colony count technique at 30°C.
7. Marshall, R.T. (1993) Standard methods for the microbiological examination of dairy products, 16th ed. American Public Health Association, Washington D.C.
8. Reasoner and Geldreich (1985). *Appl. Environ. Microbiol*. 49, 1.
9. U.S. Food and Drug Administration. 2001. Bacteriological analytical manual, online. AOAC International, Gaithersburg, Md.
10. Vanderzant C. and D.F. Splittstoesser (1992) Compendium of methods for the microbiological examination of foods, 3rd ed. American Public Health Association, Washington D.C.
11. Wehr and Frank (ed.). 2004. Standard methods for the examination of dairy products, 17th ed. American Public Health Association, Washington, D.C.
12. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product	Pack Size
205160510100	Plate Count Agar Plate	100 Plates