ARENA
BioScien

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Plate Count Agar

A solid medium suggested for the enumeration and cultivation of microorganisms

REF: BS.1/PC01.100.0100	100 Gram	REF: BS.1/PC01.250.0250	250 Gram
REF: BS.1/PC01.500.0500	500 Gram		

CLINICAL SIGNIFICANCE

Plate Count Agar, also known as Standard Methods Agar, is recommended for the determination and enumeration of microorganisms in food, dairy products, water, waste water and clinical samples. Plate Count Agar is not intended for use in the diagnosis of disease or other conditions in humans.

METHOD PRINCIPLE

Plate Count Agar is a non-selective medium. The amount of microorganism is shown as colony forming units per gram (CFU/g), in solid samples and per ml (CFU/ml) in liquid samples. The recommended technique is pour plate technique. The samples are diluted and appropriate dilutions are added in Petri plates. The medium contains tryptone that provides amino acids, nitrogen, carbon, vitamins and minerals for growth of the organism. Yeast extract mainly supplies the B-complex vitamins. Dextrose is a fermentable carbohydrate that provides an energy source for the growth of microorganisms. Agar is the solidifying agent.

MEDIA COMPOSITION

Item	Formula per liter of medium
Tryptone	5 gm
Yeast Extract	2.5 gm
Dextrose	1 gm
Agar	15 gm

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.
  S56: dispose of this material and its container at hazardous or special waste collection point.
  S57: use appropriate container to avoid environmental contamination.
  S61: avoid release in environment.

For further information, refer to the Plate Count Agar material safety data sheet.

STORAGE AND STABILITY

BioScien Plant Count Agar should be stored between 10-30°C in a firmly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Final pH 7.0±0.2 at 25°C

PREPARATION

Suspend 23.5 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile petri plates

Deterioration

The color of ***BioScien*** Plate Count Agar medium is cream to yellow homogeneous free flowing powder. Prepared Media is light yellow in color. If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

SPECIMEN COLLECTION AND PRESERVATION

Blood samples, water samples, food and dairy samples.

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile petri-dishes
- Incubator
- Autoclave

PERFORMANCE CHARACTERISTICS

Cultural characteristics observed after incubation at 35 - 37°C for 18 - 48 hours.

Microorganism	Inoculum (CFU)	Recovery/Expected Results
Enterococcus faecalis (ATCC 29212)	50-100	≥ 50%
Escherichia coli (ATCC 25922)	50-100	≥ 50%
Staphylococcus aureus (ATCC 25923)	50-100	≥ 50%
Bacillus subtilis (ATCC 6633)	50-100	≥ 50%

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact ***BioScien*** technical support.

REFERENCES

1. Buchbinder L., Baris Y., Aldd E., Reynolds E., Dilon E., Pessin V., Pincas L. and Strauss A., 1951, Publ. Hlth. Rep., 66:327.
2. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
4. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
5. Isenberg, H.D. Clinical Microbiology Procedures Handb0ook. 2nd Edition
6. Marth, E.H. (ed.). 1978. Standard methods for the examination of dairy products, 14th ed. American Public Health Association, Washington, D.C.
7. U.S. Food and Drug Administration. 2002. Bacteriological analytical manual, (on line). AOAC International,Gaithersburg,Md. http://www.cfsan.fda.gov/~ebam/bam-toc.html.

SYMBOLS IN PRODUCT LABELLING			
IVD	For in-vitro diagnostic use	Σ	Number of <n> test in the pack
LOT	Batch Code/Lot number	⚠	Caution
REF	Catalogue Number		Do not use if package is damaged
	Temperature Limitation		Consult Instruction for use
	Expiration Date		
	Manufactured by		

EC REP

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CE