

**Plate Count Agar**

A solid medium suggested for the enumeration and cultivation of microorganisms

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| REF: V.1/PC01.100 100 Gram REF: V.1/PC01.500 500 Gram  | REF: V.1/PC01.250 250 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**

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| Item  | Formula per liter of medium  |
| Tryptone Yeast Extract  | 5 gm2.5 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**

**Lab.Vie** Plate 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.

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| 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**

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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.

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.

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3. 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.

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| SYMBOLS IN PRODUCT LABELLING  |
|   IVD For in-vitro diagnostic use  |  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   Expiration Date  Manufactured by  |   Consult Instruction for use    |

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