

Plate Count Agar

Catalog : HB0101-10-500

Plate Count Agar is used for the cultivation of bacteria and for the enumeration of microorganisms in water, sewage, faeces and other materials. This medium contains sugar.

Approximate Formula:

Ingredients	gm/liter
Pancreatic digest of casein	5.0
Yeast extract	2.5
Dextrose	1.0
Agar	15.0
Final pH7.0±0.2 at 25℃	

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 23.5g of the medium in one liter of deionized or distilled water. Mix well and heat with frequent agitation. Boil for 1 minute. Dispense into tubes or flasks. Sterilize in the autoclave at 121℃ (15 lbs.) for 15 minutes.

Principle and Interpretation:

Pancreatic digest of casein provides amino acids and other complex nitrogenous substances. Yeast extract supplies Vitamin B complex. APHA recommends the use of pour plate technique. The samples are diluted and appropriate dilutions are added in Petri plates. Sterile molten agar is added to these plates and plates are rotated gently to ensure uniform mixing of the sample with agar. The poured plate count method is preferred to the surface inoculation method, since it gives higher results. Plate Count Agar is also suitable for enumerating bacterial count of sterile rooms. Agar is the solidifying agent.

Appearance:

Dehydrated medium is a free-flowing yellowish powder. The prepared medium is a kind of yellowish transparent gel.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

Plate Count Agar must be stored tightly capped in the original container at 5-30℃. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8℃.

Quality control:

Prepare the medium per label directions. Inoculate and incubate at 36±1℃ for 48±2 hours.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Recovery	Remarks
<i>Pseudomonas aeruginosa</i>	ATCC9027	20-200	Luxuriant	≥70%	Colorless transparent colonies
<i>Escherichia coli</i>	ATCC25922	20-200	Luxuriant	≥70%	Colorless transparent large colonies
<i>Bacillus subtilis</i>	ATCC6633	20-200	Luxuriant	≥70%	White irregular colonies
<i>Bacillus cereus</i>	ATCC11778	20-200	Luxuriant	≥70%	White irregular colonies
<i>Staphylococcus Aureus</i>	ATCC6538	20-200	Luxuriant	≥70%	Yellowish colonies

References:

1. Buchbinder L., Baris Y., Aldd E., Reynolds E., Dillon 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. GB4789.28-2013 People's Republic of China food safety national standard food microbiology test medium and reagent quality requirements.