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88588 Plate-Count-Agar according to Buchbinder et al. (Casein-peptone Dextrose Yeast Agar, Standard Methods Agar, Tryptone Glucose Yeast Extract Agar)

Plate-Count-Agar is recommended for the plate count of microorganisms in food, dairy products, water and waste water. The formulation is compliant and recommended by APHA, FDA, GB and ISO committee.

Composition:

Ingredients	Grams/Litre
Casein enzymic hydrolysate	5.0
Yeast extract	2.5
Dextrose	1.0
Agar	15.0

Final pH 7.0 +/- 0.2 at 25°C

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions:

Suspend 23.5 g in 1 litre distilled water. Boil to dissolve the medium completely. Sterilise by autoclaving at 121°C for 15 min.

Principle and Interpretation:

This Plate Count Agar is formulated as described by Buchbinder et al. which is recommended by APHA, FDA and ISO committee for the isolation of microorganisms in milk and other dairy products. Casein enzymic hydrolysate provides amino acids and other complex nitrogenous substances and yeast extract supplies Vitamin B complexes. APHA recommends the pour plate technique. GB recommends Plate Count Agar for Aerobic Plate Count in Food by pour plate technique also. The samples are diluted and appropriate dilutions are placed 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. Plate Count Agar is also suitable for determining bacterial count from sterile rooms.

Cultural characteristics after 48h±2h at 36℃±1℃

Organisms (ATCC)	Productivity rate
Escherichia coli (25922; WCDM 00013)	≥0.7
Staphylococcus aureus (6538; WDCM 00193)	≥0.7
Bacillus subtilis (6633; WDCM 00003)	≥0.7
Enterococcus faecalis (29212; WDCM 00087)	≥0.7
Lactobacillus rhamnosus (9515)	≥0.7
Staphylococcus aureus (25923; WDCM 00034)	≥0.7
Streptococcus pyroogenes (19615)	≥0.7

Note:
Productivity Rate (Quantitative methods using TSA as Reference culture Media)

References:

1. Buchbinder, Baris, Goldstein, Pupl. Hlth. Rep., 66, 327 (1951)
2. International Organisation for Standardisation (ISO), Draft ISO/DIS 4833 (1991)
3. R. Marshall (Ed.), Standards Methods for the Examination of Diary Products, 16th ed., APHA Inc., Washington, D.C. (1992)
4. C. Vanderzant, D. Splitterstoesser (Eds.), Compendium of Methods for the Microbiological Examination of Foods, 3th ed., APHA Inc., Washington, D.C. (1992)
5. A.E. Greenberg, L.S.Clesceri, A.D. Eaton (Eds.), Standards Methods for the Examination of Water and Waste Water, 18th ed., APHA Inc., Washington, D.C. (1992)
6. R. Atlas, Handbook of Microbiological Media, L. Parks (Ed.), CRC Press, Inc., Boca Raton (1993)
7. U.S. Food and Drug Administration, Bacteriological Analytical Manual, 8th ed., AOAC, Arlington, Va (1995)
8. National Standard of the People's Republic of China, GB4789.2-2016, Food Microbiological Examination: Aerobic Plate Count
9. GB4789.28Annex D Standard for quality control of the culture media and reagents made by manufacturer and laboratory

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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