Spectrum For Diagnostic Industries

Plate count agar
(*Standard methods agar*)

REF.	Pack size
636 01 100	100 gm
636 01 500	500 gm

Intended Use

Plate count agar (Standard Methods Agar) is used for the determination of plate counts of microorganisms such as *Escherichia coli* isolated from sterile blood and urine.

Background

Plate count agar was developed by Buchbinder, Baris, and Goldstein in 1953 at the request of the American Public Health Association (APHA). This medium is recommended for the plate count of microorganisms in milk and other dairy products and may also be used to determine sanitary quality foods , water and other materials.

Principle

Tryptone provides nitrogenous substances and other amino acids.Yeast extract provides B complex vitamins and dextrose is the energy source

Components	gm/Liter
Yeast Extract	2.5
Dextrose	1.0
Tryptone	5.0
Agar	15.0

Final pH (at 25°C) 7.0 ± 0.2

Preparation, Storage and Stability

Store the dehydrated medium at 10-30°C and use before the expiry date on the label.Store the prepared medium at 2-8°C. After the desired amount of medium is taken out, replace the cap tightly to protect from hydration.

Procedure

1. Suspend 23.5 g of the powder in 1 L distilled water and mix well. 2.Boil with frequent agitation to dissolve the powder completely. 3.Sterilize by autoclaving at 121°C for 15 minutes.

Quality control

Appearance

1- Dehydrated Appearance :Powder is homogeneous, free flowing, and light beige.

2- Prepared Appearance : Prepared medium is trace to slightly hazy, and light beige to medium amber.

3-Cultural Response: after 18-24 hours at 35 ± 2°C for clinical specimens or 30-35 (as per pharmacopoeia)

Organisms (ATCC)	Growth
Escherichia coli	Good
Enterococcus faecalis	Good
Bacillus subtilis	Good
Lactobacillus rhamnosus	Good

Interpretation of the results

Count colonies on all plates containing 30 - 300 colonies. Calculate bacterial count per milliliter of sample by multiplying the average number of colonies per plate by the reciprocal of the dilution used. Report the count as CFU/mL.

Precautions

1- After autoclaving , do not heat the medium longer than 3 hours at 40-45°C

2- Sterile solidified medium can be remelted only once.

Bibliography

1. Marshall, R. T. (ed.). 1993. Standard methods for the microbiological examination of dairy products, 16th ed. American Public Health Association, Washington, D.C.
2. Cunnif, P. (ed.). 1995. Official methods of analysis AOAC International, 16th ed. AOAC International, Arlington, VA.
3. Buchbinder, L., Y. Baris, and L. Goldstein. 1953. Further studies on new milk- free media for the standard plate count of dairy products. Am J. Public Health 43:869-872.

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