Product :
PLATE COUNT MODIFIED AGAR

Specification
Modified Plate Count Agar (with a lesser amount of agar), especially recommended for aerobic enumeration by the poured plate method.

Formula * in g/L
Casein peptone..... 5.0
Yeast extract..... 2.5
Dextrose..... 1.0
Agar.....9.0

Final pH 7,0 ±0,2 at 25 ºC
* Adjusted and /or supplemented as required to meet performance criteria

Directions
Dissolve 17.5 g of powder in 1 L of distilled water. Heat with constant stirring until boiling. Distribute in the suitable containers and sterilize in the autoclave at 121°C for 15 minutes.

Description
Plate Count Modified Agar follows the same specifications as Plate Count Agar, except for a reduction in agar concentration. This modification provides better growth of colonies when using the poured plate method. As the medium is softer and hence the colonies can expand into the medium and appear larger.

Technique
Prepare ten-fold serial dilutions of the sample and take 1 mL in duplicate aliquots from each dilution and put them in sterile Petri dishes. Pour approx. 20-22 mL of sterile cooled medium (around 45°C) in each of the plates. Mix gently by swirling the plate in a figure 8. Leave the plates undisturbed to solidify and incubate in an inverted position. The incubation time and temperature depend on the type of microorganism under investigation. In general for an aerobic count, incubate for 3 days at 30°C. Checking the plates at 24, 48 and 72 hours.
The plate count method proposed by the APHA consists of the pour plate method i.e. pouring the molten agar at 50°C on plates containing the diluted samples. The final count is carried out after 48 hours of incubation at 32 -35°C.
For microorganisms with other temperature requirements, the following incubations have been suggested: 2 days at 30 ±1°C, 2-3 days at 45°C, 2 days at 55°C, 3-5 days at 20°C, 7-10 days at 5-7°C.
Sample dilutions are prepared with 1/4 Ringer's solution (Art. No.06-073), Buffered Peptone Water (Art. No.02-277) or Maximum Recovery Diluent (Art. No. 02-510) depending on their nature.
The poured plate count method is preferred to the surface inoculation method, since it gives higher counts, although the latter facilitates isolation and reseeding of the colonies.

Quality control
Incubation temperature: 30±1ºC **Incubation time:** 72±3h
Inoculum: Practical range 100 ± 20 CFU. Min. 50 CFU (Productivity) according to ISO 11133:2014/Amd 1:2018

Microorganism	Growth	Remarks
Staphylococcus aureus ATCC® 25923	Productivity > 0.70	-
Bacillus subtilis ATCC® 6633	Productivity > 0.70	-
Escherichia coli ATCC® 8739	Productivity > 0.70	-
Listeria monocytogenes ATCC® 35152	Productivity > 0.70	-

References

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· ISO 4833 (2003) Microbiology of food and animal feeding stuffs. Horizontal method for the enumeration of microorganisms. Colony count technique at 30ºC.
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· ISO 17410 (2001) Horizontal method for the enumeration of psychrotrophic microorganisms.
· MARSHALL, R.T. (1992) Standard Methods for the Examination of Dairy Products. 16th ed. APHA. Washington.
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Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 ºC to 30 ºC).