TECHNICAL DATA SHEET

Article No. 8459

Plate Count Skim Milk Agar (PCA)

SYNONYMS

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SPECIFICATION

Solid medium for the plate count of milk and dairy products, according to DIN and FIL/IDF standards.

FORMULA* IN G/L

Tryptone	5.00
Yeast extract	2.50
Skimmed milk	1.00
Dextrose	1.00
Agar	10.50

Final pH 7.0 ±0.2 at 25 °C

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

DIRECTIONS

Suspend 20 g of powder in 1 l of distilled water. Heat to boiling with constant stirring. Distribute into suitable containers and sterilize by autoclaving at 121 °C for 15 minutes.

DESCRIPTION

This medium, after adding milk, is more nutritious than other standard media; however, the opalescence of the medium sometimes makes early observations difficult.

TECHNIQUE

Prepare 10-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 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, buffered Peptone Water or Maximum Recovery Diluent 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 ±1.0 °C
- Incubation time: 72 ±3 h
- Inoculum: Practical range 100 ±20 CFU. Min. 50 CFU (productivity), according to ISO 11133:2014. Spiral Plate Method.

Microorganism	Growth	Remarks
Escherichia coli ATCC® 25922	Productivity >0.70	None
Bacillus subtilis ATCC® 6633	Productivity >0.70	None
Staphylococcus aureus ATCC® 25923	Productivity >0.70	None
Escherichia coli ATCC® 8739	Productivity >0.70	None

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STORAGE

Keep tightly closed, away from light, in a dry place (4-30 °C).

SHELF LIFE

4 years from date of production.

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