

### 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 and let it soak. Bring to the boil, constantly stirring. Distribute into suitable containers and sterilize in the autoclave at 121 °C for 15 minutes.

### Description

This medium, with added milk, is more nutrient rich than other standard media; however, the opalescence of the medium makes early observations sometimes difficult.

Due to its lower agar concentration, it may be used for the pour plate method or the spread plate method.

### 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 reseeded of the colonies.

### Quality control

**Incubation temperature:** 30°C ± 1.0

**Incubation time:** 72 ± 3 h

**Inoculum:** Practical range 100±20 CFU. min. 50 CFU (productivity), according to ISO 11133:2014/Amd 1:2018. Spiral Plate Method.

### Microorganism

*Escherichia coli* ATCC® 25922

*Bacillus subtilis* ATCC® 6633

*Staphylococcus aureus* ATCC® 25923

*Escherichia coli* ATCC® 8739

### Growth

Productivity > 0.70

Productivity > 0.70

Productivity > 0.70

Productivity > 0.70

### Remarks

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**References**

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- ISO 17410 (2001) Horizontal method for the enumeration of psychrotrophic microorganisms.
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**Storage**

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