



Specification

Medium for aerobic plate counts by the surface inoculation method (standard Plate Count Agar) according to ISO 4833, 8552 & 17410 Standards and IFU No. 6.

Presentation

10 Prepared bottle
Bottle 125 ml
with: 100 ± 5 ml.

Packaging Details

1 box with 10 bottles 125 ml
Non injectable cap
Suitable for melting in microwave ovens

Composition

Formula in g/l

Casein peptone.....	5,0
Yeast extract.....	2,5
Dextrose.....	1,0
Agar.....	15,0

Final pH 7.0 ±0,2 at 25°C

Description

The Plate Count Agar formulation is according to that of Buchbinder et al. as recommended in their study of media for the plate count of microorganisms.

The original formulation of the standardized agar for dairy microbiology has been modified in order to avoid the addition of milk. This new composition allows the growth of most microorganisms without any further additions.

This medium's formulation is equivalent to that described by the 'Standard Methods for the Examination of Dairy products', the USP's 'Tryptone Glucose Yeast Agar', the 'Deutsche Landwirtschaft' and to the APHA and AOAC's Plate Count Agar. This is the medium of choice for the plate count of any type of sample

Usage instructions

To use, the contents of the bottle should be poured into plates. The melting of the culture medium should be carried out according to the manufacturer's instructions, either in a water bath or microwave oven. Never apply direct heat to melt a medium. The melting temperatures and times depend on the shape of the container, the volume of medium and the heat source. Before melting any medium loosen the screwcap of the container to avoid breaking the container. The medium should be melted only once and used. Media with agar should not be melted repeatedly as their characteristics change with each remelting. Overheating should be avoided as much as prolonged heating, especially with regard to media with an acidic or alkaline pH. Once melted pour the plates using aseptic techniques. To inoculate, follow standard laboratory methods or the applicable norms. Spiral plate method, streak plating, econometric methods, dilution banks, spread plating etc...

Prepare ten fold serial dilutions of the sample and take 1 mL aliquots in duplicate from each dilution and put them into sterile Petri plates. Pour 20 mL approx. of sterile cooled medium (around 45°C) in each of the plates. Mix gently by swirling the plate in the form of 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 study. For a general aerobic count, incubate for 3 days at 30°C. Taking readings after 24, 48 and 72 hours.

The plate count method proposed by the APHA consists of pouring the molten agar at 50°C on plates containing the diluted samples (pour plate technique). 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 32-35°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 spread plate technique, since it gives higher counts. Nevertheless, the latter facilitates isolation and reseeded of the colonies.

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**Quality control**

Color : Yellowish

pH: (at 25 °C) 7,0 ±0,2

Incubation temperature: 35°C ±2,0

Incubation time: 24-48 h

Inoculum: 10-100 CFU. Spiral Plate Method (according to standard ISO/TS 11133-1/2)

Microorganism**Growth****Remarks**

<i>Bacillus subtilis</i> ATCC 6633	Productivity > 0.70	-
<i>Enterococcus faecalis</i> ATCC 19433	Productivity > 0.70	-
<i>Staphylococcus aureus</i> ATCC 6538	Productivity > 0.70	-
<i>Listeria monocytogenes</i> ATCC 19115	Productivity > 0.70	-
<i>Yersinia enterocolitica</i> ATCC 9610	Productivity > 0.70	-
<i>Escherichia coli</i> ATCC 25922	Productivity > 0.70	-

Sterility Control

No growth within 48 h and 7 days at 20-25°C and 30-35°C

Storage/Shelf Life

Shelf Life	Storage
16 months	8-25°C

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