Technical Data Sheet



Product: Plate Count agar (PCA) double wrap

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

20 Plates /Irradiated 90 mm - Double wrapping with: 21 ± 2 ml

Packaging Details

1 box with 2 cellophane bags (double wrapping) with 10 plates/bag. Side labeling. Every pack exhibitis a irradiation indicator stacked on the side of the bag.(8 -14kGy).

Shelf LifeStorage3,5 months2-14 °C

Composition

Composition (g/I):	
Casein peptone	5.00
Yeast extract	2.50
Dextrose	1.00
Agar	15.0

Description /Technique

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

Technique:

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 48 and 72 hours.

After incubation, enumerate all the colonies that have appeared onto the surface of the agar. Each laboratory must evaluate the results according to their specifications.



Reference: 110774ZI

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Quality control

Physical/Chemical control

Color : Yellowish

pH: 7.0 ± 0.2 at 25°C

Microbiological control

Inoculate:Practical range 100 ± 20 CFU. Min. 50 CFU (Productivity).

Microbiological control according to ISO 11133:2014/A1:2018.

Analytical methodology according to ISO 11133:2014/A1:2018; A2:2020.

Aerobiosis. Incubation at 30 ± 1 °C, reading at 72 ± 3h

Ps. fluorescens ATCC 13525 (10 days/ 6,5 °C ±1) acc. ISO 17410

Microorganism

Bacillus subtilis ATCC® 6633, WDCM 00003Good (\geq 70%)Escherichia coli ATCC® 8739, WDCM 00012Good (\geq 70%)L. monocytogenes ATCC® 35152, WDCM 00109Good (\geq 70%)Staphylococcus aureus ATCC® 6538, WDCM 00032Good (\geq 70%)Ps. fluorescens ATCC® 13525, WDCM 00115Good (\geq 70%)Stph. aureus ATCC® 25923, WDCM 00034Good (\geq 70%)

Sterility Control

Incubation 48 h at 30-35 $^{\circ}\text{C}$ and 48 h at 20-25 $^{\circ}\text{C}$: NO GROWTH. Check at 7 days after incubation in same conditions.

Bibliography

· ATLAS, R.M. & L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press, Inc. London.

• BUCHBINDER, L., Y. BARIS & 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.

Growth

· CLESCERI, L.S., A.E.GREENBERG and A.D. EATON (1998) Standard Methods for the Examination of Water and Wastewater. 20th ed., APHA, AWWA, WPCF. Washington.

- · DIN 10192 (1971) Prüfungesbestimmungen für Milch und Milcherzeugnisse. Deutsche Landwirtsachft, Fachbereit und Ernahrung.
- · DOWNES, F.P. & K. ITO (2001) Compendium of Methods for the Microbiological Examination of Foods. 4th ed., APHA, Washington.
- \cdot FIL/IDF Standards 3 (1958), 100, 101 (1981), 109 (1982) and 132 (2004).
- · HORWITZ, W. (2000) Official Methods of Analysis. AOAC International. Gaithersburg.

· IFU Method No 6 (1996) Mesophilic, thermoduric and thermophilic bacteria: Spores Count. D-1 Mesophilic Aerobic Sporeforming bacteria: Spores count.

· ISO 4833 (2003) Microbiology of food and animal feeding stuffs. Horizontal method for the enumeration of microorganisms. Colony count technique at 30°C.

· ISO 8552 (2004) Milk - Estimation of psychrotrophic microorganisms. Colony count technique at 21°C (Rapid method).

. ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.

· ISO 17410 (2019) Horizontal method for the enumeration of psychrotrophic microorganisms.

· MARSHALL, R.T. (1992) Standard Methods for the Examination of Dairy Products. 16th ed. APHA. Washington.

Storage

Storage conditions: 2-14°C

Alternatively the plates may also be stored at the range of 2 - 25°C, with a proper performance of the medium, but some precautions must be taken into account:

-In the range of 2 - 8 °C avoid direct contact with surfaces that can freeze product.

-In the range of 15 - 25 °C, dehydration control must be taking in account.

