Condalab

Reference: 0903 **Technical Data Sheet**

Product: # STANDARD METHODS AGAR (P.C.A.) (PLATE COUNT AGAR) (APHA & ISO 4833)

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

	Packaging Details	Shelf Life	Storage
20 Prepared Plates 90 mm with: 21 ± 2 ml	1 box with 2 packs of 10 plates/pack. Single cellophane..	3,5 months	2-14°C

Composition

Composition (g/l):

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 24, 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.

Quality control

Physical/Chemical control

Color : Yellowish pH: 7 ± 0.2 at 25°C

Microbiological control

Inoculate:Practical range 100±20 CFU; Min. 50 CFU (Productivity).
Microbiological control according to ISO 11133:2014/ Adm 1:2018.

Aerobiosis. Incubation at 30 ± 1°C, reading at 24-48-72 h

Microorganism	Growth
Bacillus subtilis ATCC® 6633, WDCM 00003	Good (≥70 %)
Stph. aureus ATCC® 25923, WDCM 00034	Good (≥70 %)
Escherichia coli ATCC® 8739, WDCM 00012	Good (≥70 %)
L. monocytogenes ATCC® 35152, WDCM 00109	Good (≥70 %)

Sterility Control

Incubation 48 hours at 30-35°C and 48 hours at 20-25°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.
· 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.
· 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 (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.
· PASCUAL ANDERSON. Mª.R°. (1992) Microbiología Alimentaria. Díaz de Santos, S.A. Madrid.