TECHNICAL DATA SHEET

Article No. 9840

M17 AGAR, prepared plates

SPECIFICATION

Prepared plates. Solid selective medium for the enumeration of *Streptococcus thermophilus* in yoghurt samples.

Colour:	Brownish
pH:	6.8 ± 0.2 at 25 ºC

COMPOSITION IN G/ L

Tryptone	2.50
Meat peptone	2.50
Soya peptone	5.00
Yeast extract	2.50
Meat extract	5.00
Sodium ß-glycerophosphate	19.00
Magnesium sulfate	0.25
Ascorbic acid	0.50
Lactose	5.00
Agar	15.00

PACKAGE DETAILS

9840-20PLATES
20 Prepared Plates, 90 mm

Content:	21 ± 3 ml
Packaging unit:	1 box with 2 packs of 10 plates/pack. Single cellophane

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St.-Nr. 70093/40018 / USt-IdNr. DE147510304
Amtsgericht Stuttgart / HRA-Nr. 254140
Persönlich haftende Gesellschafterin:
Geyer Beteiligungsgesellschaft mbH
Amtsgericht Stuttgart / HRB-Nr. 252035
Geschäftsführer: Lutz-Alexander Geyer /
Oliver-Alexander Geyer / André Meise / Ralf Streicher

DESCRIPTION

M-17 Agar was developed by Terzaghi and Sandine for detecting lactic streptococci and their bacteriophages in the dairy industry, but later, Shankar and Davies proved its efficacy for the selective isolation of *Streptococcus thermophilus* in yoghurt.
The effectiveness of the medium is due to its great buffering capacity, facilitating the growth of streptococci while the high concentration of ß-glycerophosphate inhibits the growth of lactobacilli.

TECHNIQUE

The recommended technique for enumeration of streptococci is the spread plate or pour plate technique, in the latter molten agar is cooled to about 50-55 ° C before adding the sample, and for both, a 24-hour incubation at 42 °C is carried out. If the inoculation plate is on the surface, the incubation should be in an atmosphere of 10% CO2.
Almost all the colonies that appear in these conditions are streptococci. The ISO standard recommends longer incubation times or lower temperatures, this can cause morphological differences in the colonies that hinder their recognition, however a greater recovery is obtained.
The exact technique of microbiological control, can be found by referring to ISO standards.

MICROBIOLOGICAL CONTROL

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

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

Microaerophilic incubation at 37 ± 1 ºC, reading after 48-72 h

Microorganism	Growth
Lactobacillus bulgaricus ATCC® 11842, WDCM 00102	Partial Inhibition
Streptococcus thermophilus ATCC® 19258, WDCM 00134	Good (≥50 %)

Sterility control:
Incubation 48 hours at 30-35 ºC and 48 hours at 20-25 ºC: NO GROWTH.
Check at 7 days after incubation in same conditions.

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REFERENCES

·ISO 7889:2003(E) IDF 117:2003 (E) Yogourt- Enumeration of characteristic microrganisms- Colony-count technique at 37ºC.
·ISO 9232:2003(E) IDF 146:2003 (E) Yogourt- Identificcation of characteristic microorganisms (lactobacillus delbruckii subsp. Bulgaricus and Streptococcus thermophilus).
·TERAGAZHI, B.E. y SANDINE, W.E. (1975) Improved medium for lactic streptococcaceae phages from cheese factories. Appl. Environm. Microbiol 29:80, 29:807.
·SHANKAR, P.A. y DAVIES, F.L. (1977) Selective Technique for Iogurt Bacteria Enumeration. J. Soc. Dairy Technol. 30:28 CeNAN. (1982) Técnicas para el Analisis Microbiológico de Alimentos y Bebidas. Madrid.
·VANDERZANT & SPLITTSTOESSER (1992) Compendium of Methods for the Microbiological Examination of Foods.3rd. Ed. APHA. Washington. , ATLAS, R.M., L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press, Inc. London.

STORAGE

2 - 14 °C

SHELF LIFE

3 months unopened from date of manufacture

updated: 26.08.2022