

Specification

Liquid medium used for the recovery and enumeration of low numbers of coagulase-positive staphylococci in foods according to ISO, FIL-IDF and EN standards.

Presentation

20 Tubes
Tube 16 x 113 mm
with: 9 ± 0,1 ml

Packaging Details

1 box with 20 tubes, 16x113 mm glass tubes, ink
labelled and metal-Non injectable cap..

Shelf Life

8 months

Storage

8-14°C

Composition

Composition (g/l):

Tryptone.....	10.00
Meat extract.....	5.00
Yeast extract.....	5.00
Lithium chloride.....	5.00
D-Mannitol.....	20.00
Sodium chloride.....	5.00
Glycine.....	1.20
Sodium pyruvate.....	3.00
Polysorbate 80.....	1.00
Potassium tellurite.....	0.11

Description /Technique

This medium for the selective enrichment of staphylococci was formulated in 1966 by Giolitti and Cantoni.

The growth of staphylococci is promoted by pyruvate, glycine and above all by a high concentration of mannitol. Addition of Polysorbate 80 is necessary for the successful recovery of *Staphylococcus aureus* (Chopin *et al.*, 1985). Accompanying flora are inhibited by lithium chloride and potassium tellurite.

Anaerobic growth conditions increase the selectivity of the medium. Generally, growth of staphylococci can be recognized by a blackening or black precipitates in the culture medium due to reduction of tellurite to metallic tellurium.

Technique:

Refer to the standard protocol for specific products (Food and animal feeding stuffs EN-ISO 6888-3:2003; Milk and milk based products ISO 5944:2001 and FIL-IDF 60:2001).

Incubate anaerobically for 24-48 hours at 37°C.

After 24 hours, subculture any tubes showing blackening or black precipitate by streaking onto Baird-Parker Agar. Incubate the remainder of the tubes for a further 24 hours and subculture all tubes showing growth (irrespective of blackening) to Baird-Parker Agar.

When determining the bacterial count by the MPN method, all tubes showing growth are considered as presumptive positive for staphylococci and they are confirmed only if they produce a positive result in the coagulase test.

Quality control

Physical/Chemical control

Color : yellow pH: 6.9 ± 0.2 at 25°C

Microbiological control

Inoculate: Practical range 100 ± 20 CFU; Min. 50 CFU (Productivity)/ 10⁴-10⁶ (Selectivity).

Microbiological control according to ISO 11133:2014/ Adm 1:2018.

Aerobiosis. Incubation at 37 ± 1°C, reading after 24/44 ± 4h

Microorganism

Stph. aureus ATCC® 25923, WDCM 00034

Staphylococcus aureus ATCC® 6538, WDCM 00032

Escherichia coli ATCC® 8739, WDCM 00012

Mix of the control strains

Growth

Good - Black precipitate

Good - Black precipitate

Inhibited

Good - Black precipitate

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

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- ISO 5944 Standard (2001) Milk and milk based Products. Detection of coagulase-positive staphylococci. MPN technique.
- ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.