

Specification

Differential selective medium for the enumeration of enterococci in water.

Presentation

30 Membrane filtration plates
55 mm Plates for filtration purposes
with: 9 ± 1 ml

Packaging Details

1 box containing: 6 plastic bags with 5 plates of 55 mm/ bag.

Shelf Life **Storage**
6 months 2-25 °C

Composition

| Composition (g/l): |
|--------------------------------|
| Tryptose.....20.0 |
| Yeast extract.....5.00 |
| D(+) Glucose.....2.00 |
| Dipotassium phosphate.....4.00 |
| Sodium azide.....0.40 |
| Agar.....12.0 |

Description /Technique

Description

Differential medium for enumeration and differentiation of enterococci in water samples based on the resistance to sodium azide.

Technique

For the membrane filtration technique, take 100 mL of a well mixed water sample, and pass it through a sterile membrane filter. Then wash with 30 mL of sterile water to rinse the funnel of the filtering system.

Using sterile forceps, transfer the membrane aseptically to the culture medium contained in a Petri dish, making sure that the filter surface faces upwards. Close the lid and invert the plate. Incubate at 36 ± 2°C for 44 ± 4 hours. The developed colonies that appear in the surface of MF. The secondary or accompanying Gram negative bacteria are inhibited by sodium azide.

Note: the presence of enterococci must be confirmed with complementary biochemical tests (Catalase, Esculin, etc).

Quality control

Physical/Chemical control

Color : Light amber - pale pink pH: 7.2 ± 0.1 at 25°C

Microbiological control

Membrane Filtration /Practical range 100 ± 20 CFU. min. 50 CFU (productivity)./ 10^4 - 10^6 CFU (selectivity)/ $\geq 10^3$ CFU (specificity).

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

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

Aerobiosis. Incubation at 36 ± 2 °C, reading at 44±4 h

Microorganism

Escherichia coli ATCC® 25922, WDCM 00013

Growth

Inhibited

Enterococcus faecalis ATCC® 29212, WDCM 00087

Good ($\geq 50\%$)

Enterococcus faecalis ATCC® 19433, WDCM 00009

Good ($\geq 50\%$)

Enterococcus faecium ATCC® 6057, WDCM 00177

Good ($\geq 50\%$)

Stph. aureus ATCC® 25923, WDCM 00034

Poor

Sterility Control

Incubation 48 h at 30-35 °C and 48 h at 20-25 °C: NO GROWTH.

Check at 7 days after incubation in same conditions.

Revision date: 13/06/2022

Bibliography

- ATLAS, R.M. and L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press. Boca Raton. Fla. USA.
- ISO 7899-2:2000 Standard. Water Quality. Detection and enumeration of enterococci by membrane filtration method.
- . ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- LACHICA, LV.F. and P.A. HARTMAN (1968) Two improved media for isolating and enumerating enterococci in certain frozen foods. J. appl. Bact. 31:151-156.
- SLANETZ, L.W. and BARTLEY, C.H. (1957) Numbers of enterococci in water, sewage and faeces determined by the membrane filter technique with an improved medium. J. Bact. 74:591-596.
- . UNE-EN ISO 11133 (2014). Microbiología de los alimentos para consumo humano, alimentación animal y agua.-Preparación, producción, conservación y ensayos de rendimiento de los medios de cultivo.