

Specification

Solid medium used for the enumeration of water microorganisms according to ISO standards.

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

6 months

Storage

2-25 °C

Composition

Composition (g/l):

Yeast Extract.....	3.00
Tryptone.....	6.00
Agar.....	15.0

Description /Technique

Description

This medium, formulated according to ISO Standard 6222 and others, is for the enumeration of heterotrophic microorganisms from water.

Technique:

Collect, dilute and prepare samples and volumes to be filtered as required according to specifications, directives, official standard regulations and/or expected results.

Filter the sample through a 0.45 µm pore membrane and apply it onto the surface of the agar.

Incubate the plates right side up aerobically at $36 \pm 2^\circ\text{C}$ for 44 ± 4 h.

(Incubation times greater than those mentioned above or different incubation temperatures may be required depending on the sample, on the specifications, or normative ISO...)

After incubation, enumerate all the colonies on the surface of the membrane.

Calculate total microbial count per ml of sample by multiplying the average number of colonies per membrane by the inverse dilution factor. Report results as Colony Forming Unit (CFU's) per ml along with incubation time and temperature.

Quality control

Physical/Chemical control

Color : Yellowish pH: 7.2 ± 0.2 at 25°C

Microbiological control

Membrane Filtration; Practical range 100 ± 20 CFU. min. 50 CFU (productivity).

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

Aerobiosis. Incubation at $36 \pm 2^\circ\text{C}$, reading at 44 ± 4 h

Reference medium : YEA (validated). Microbiological control according to ISO 11133:2014/A1:2018

Microorganism

Stph. aureus ATCC® 25923, WDCM 00034
Escherichia coli ATCC® 25922, WDCM 00013
Bacillus subtilis ATCC® 6633, WDCM 00003
Ps. aeruginosa ATCC® 27853, WDCM 00025
Escherichia coli ATCC® 8739, WDCM 00012

Growth

Good ($\geq 70\%$)
Good ($\geq 70\%$)
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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

- ISO Standard 6222 Water Quality - Enumeration of cultivable microorganisms. Colony count by inoculation in a nutrient agar culture.
- ISO Standard 5667-2 (1991) Water Quality - Sampling - Guidance on sampling techniques.
- ISO Standard 5667-3 (1996) Water Quality - Sampling - Guidance on the preservation and handling of samples.
- ISO Standard 6887 (1999) Microbiology - General - Guidance for the preparation of dilutions for microbiological examination.
- ISO Standard 8199 (1988) Water Quality - General guide to the enumeration of microorganisms by culture.
- ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.