

Also known as

Water Plate Count Agar

Specification

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

Formula * in g/L

Casein peptone.....	6.00
Yeast extract.....	3.00
Agar.....	15.00

Final pH 7.2 ±0.2 at 25 °C

* Adjusted and /or supplemented as required to meet performance criteria

Directions

Suspend 24 g in 1 l of purified water. Dissolve by bring to the boil with frequent stirring. Distribute into final containers and sterilise by autoclaving at 121 ° C for 15 minutes.

Description

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

Technique

Using a water sample obtained according to the ISO Standard 5667-2 and 5667-3, make a decimal dilution series (see ISO Standard 6887) using 1/4 Ringer Solution and take aliquots to 2 parallel series of plates. Pour the sterilized Tryptone Extrait de levure Agar cooled to 45 °C, and homogenize with the sample (see ISO Standard 8199). Once solidified, incubate one of the series à 36 ± 2 °C for 48 ± 2 hours and the other one à 22 °C for 3 days (72 ± 4 hours).

In order to achieve a good count, select plates with 30-300 colonies. Express the results as number of colony forming units per millilitre (CFU/ ml) of sample for each temperature of incubation. If there are no colonies with the undiluted sample express the results as "none detected in one mL". If there are more than 300 colonies in the highest dilution express the results as ">300 CFU/ ml".

Quality control
Incubation temperature: 36 °C ± 2.0 **Incubation time:** 44 ± 4 h

Inoculum: Practical range 100 ± 20 CFU. min. 50 CFU (productivity) according to ISO 11133:2014/Amd 1:2018. Spiral Plate Method.

Microorganism

Staphylococcus aureus ATCC® 25923
Bacillus subtilis ATCC® 6633
Escherichia coli ATCC® 25922
Pseudomonas aeruginosa ATCC® 27853
Escherichia coli ATCC® 8739

Growth

Productivity > 0.70
 Productivity > 0.70
 Productivity > 0.70
 Productivity > 0.70
 Productivity > 0.70

Remarks

Reference culture medium: YEA.
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References

- ISO Standard 6222 (1999) 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.

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 °C to 30 °C).