

# TECHNICAL DATA SHEET

Article No. 9688

**Tryptone Yeast Extract Agar, prepared medium**

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## SYNONYMS

Water Plate Count Agar

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## SPECIFICATION

Ready to use medium, tubes/bottles, sterile. Solid medium used for the enumeration of water microorganisms according to ISO 6222; ISO 5667, ISO 6887, ISO 8199.

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

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## COMPOSITION IN G/L

Yeast extract	3.00
Tryptone	6.00
Agar	15.00

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## PACKAGING DETAILS

### 9688-20x15ML-TUBE

Volume 15 ± 1 ml  
Packaging unit 20 tubes  
1 box of 20 x 15 ml in tubes. Glass tubes 17x145 mm, metal cap.

### 9688-10x100ML

Volume 100 ± 3 ml  
Bottle size 125 ml  
Packaging unit 10 bottles  
1 box with 10 x 125 ml in 125-ml-bottles. Plastic screw inner cap. For use with syringe needles with a diameter ≤ 0.8 mm.



### 9688-10x200ML

Volume 200 ± 5 ml  
 Bottle size 250 ml  
 Packaging unit 10 bottles

1 box with 10 x 200 ml in 250-ml-bottles. Injectable cap. Plastic screw inner cap. For use with syringe needles with a diameter ≤ 0.8 mm.

### 9688-10x450ML

Volume 450 ± 5 ml  
 Bottle size 500 ml  
 Packaging unit 10 bottles

1 box with 10 x 450 ml in 500-ml-bottles. Injectable cap: Plastic screw inner cap + protective outer blue cap. For the use of syringe needles with a diameter ≤ 0.8 mm.

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## GUIDELINES

### Description:

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

### Technique:

Melt the culture medium and pouring into sterile plates.

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 Yeast Extract Agar cooled to 45 °C, and homogenize with the sample (see ISO Standard 8199). Once solidified, incubate one of the series at 36 ± 2 °C for 48 ± 2 hours and the other one at 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 milliliter (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".

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## MICROBIOLOGICAL CONTROL

Melt Medium - Prepare Plates - Spiral Spreading: Practical range 100 ± 20 CFU. min. 50 CFU (productivity)

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

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

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

Microorganism	Growth
<i>Escherichia coli</i> ATCC® 25922, WDCM 00013	Good (≥70 %)
<i>Escherichia coli</i> ATCC® 8739, WDCM 00012	Good (≥70 %)

<i>Bacillus subtilis</i> ATCC® 6633, WDCM 00003	Good (≥70 %)
<i>Ps. aeruginosa</i> ATCC® 27853, WDCM 00025	Good (≥70 %)
<i>Stph. aureus</i> ATCC® 25923, WDCM 00034	Good (≥70 %)

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.

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## 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.

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## STORAGE

8–25 °C

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## SHELF LIFE

12 months unopened from date of manufacture

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last updated: 29.08.2023

