

Yeast Extract Agar acc. to ISO 6222

Nutrient medium for the determination of total microbial count in water.

Yeast extract agar is a medium rich in nutrients which permits the recovery of a wide spectrum of bacteria, yeast and moulds. The medium conforms with the ISO norm 6222 and the Swedish Standard SS 028171 for the examination of water.

Mode of Action

Water can contain a large number of microorganisms coming in particular from the earth and vegetation.

The combination of a culture medium rich in nutrients with incubation temperatures of 36°C and 22°C allows the detection of a large number of these organisms.

Typical Composition (g/litre)

Peptone from casein 6.0; yeast extract 3.0; agar-agar 15.0.

Preparation

Suspend 24.0 g in 1 litre demin. water and heat in a boiling water bath or steam jet until the medium is completely dissolved. Then autoclave medium for 15 min. at 121 °C and cool to 45±1°C. The culture medium should not be kept in the water bath for longer than 4 h at 45 °C.

pH: 7.2 ± 0.2 at 25°C

The prepared medium is clear and yellow-brown in colour. The prepared medium remains stable for 1 week at 4 ± 2 °C.

Experimental Procedure

The determination of the total microbial count is carried out by the pour plate method.

15 - 20 ml of culture medium (45°C) are added to 1 ml of sample and mixed well.

Each sample is incubated both at 36 ± 2 °C for 44 ± 4 h as well as 22 ± 2 °C for 68 ± 4 h.

Evaluation

The colonies per plate are counted for each incubation temperature and the microbial count/ml is calculated.

Literature

International Organization for Standardization: Water Quality – Enumeration of culturable microorganisms – Colony count by inoculation in a nutrient agar culture medium, International Standard ISO 6222 (1999).

Ordering Information

Product	Merck Cat. No.	Pack size
Yeast Extract Agar acc. to ISO 6222	1.13116.0500	500 g

Quality control

Test strains	Inoculum cfu/ml	Growth 36 ± 2 °C / 48 h	Growth 22 ± 2 °C / 72 h
Escherichia coli ATCC 25922	ca. 100	+	
Pseudomonas fluorescens ATCC 13525	ca. 100		+
Enterococcus faecalis ATCC 11700	ca. 100	+	
Candida albicans ATCC 10231	ca. 100	+	
Aspergillus niger ATCC 16404	ca. 100		+