

17221 Tryptone Yeast extract Agar (Water Plate Count Agar) NutriSelect® Plus

Recommended by ISO Committee for estimation of microbial counts in water under the specification ISO 6222:1999.

Composition:

Ingredients	Grams/Litre
Casein enzymic hydrolysate	6.0
Yeast extract powder	3.0
Agar	12.0

Final pH 7.2 +/- 0.2 at 25°C

Store granulated media between 10-30°C in tightly closed container and the prepared medium at 20-30°C. Avoid freezing and overheating. Once opened keep powdered medium closed to avoid hydration. Use before expiry date on the label.

Appearance(color): Faint yellow and Faint beige and Faint brown, free flowing powder

Gel strength: Firm, comparable with 1.2% agar gel

Color and Clarity: Light amber coloured clear to slightly opalescent gel forms in Petri plates.

Directions:

Suspend 21 g in 1 litre distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 121°C for 15 minutes.

Principle and Interpretation:

Waters of all kinds invariably contain a variety of micro-organisms derived from various sources, such as soil and vegetation. Periodic sampling and determination of microbial counts of water provides useful information for the assessment and surveillance of water quality. Separate counts are usually made of the microorganisms which can grow and form colonies on nutrient agar media at 36°C and 22°C.

The total count might be indicative of the overall sanitary conditions at that site (2). Tryptone Yeast Extract Agar is formulated as described by ISO Committee (1) for the enumeration of viable microorganisms in water under the specification ISO 6222:1999.

Tryptone and yeast extract provide nitrogenous compounds, vitamin B complex and other essential growth nutrients. Total colony forming units (CFU) from the water samples to be tested is obtained either by spread plate or by pour plate technique.

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
<i>Klebsiella aerogenes</i> (13048/00175)	50-100	+++	≥70%
<i>Salmonella Typhimurium</i> (14028/00031)	50-100	+++	≥70%
<i>Salmonella Enteritidis</i> (13076/00030)	50-100	+++	≥70%
<i>Escherichia coli</i> (25922/00013)	50-100	+++	≥70%



References:

1. Water quality — Enumeration of culturable micro-organisms — Colony count by inoculation in a nutrient agar culture medium, International Organization for Standardization (ISO), ISO 6222:1999
2. Corry J. E. L., Curtis G. D. W., and Baird R. M., Culture Media for Food Microbiology, Vol. 34, Progress in Industrial Microbiology, 1995, Elsevier, Amsterdam

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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