



Tryptone Yeast Extract Agar

M1272

Tryptone Yeast Extract Agar is recommended for estimation of microbial counts in water.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	6.000
Yeast extract powder	3.000
Agar	12.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 21 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Periodic sampling and determination of microbial counts of water used for recreation such as beaches etc, open natural/ man made reservoir is important. The total count might be indicative of the overall sanitary conditions at that site (1). Tryptone Yeast Extract Agar is formulated as described by ISO Committee (2) for the enumeration of viable microorganisms in water under the specification ISO 6222:1988.

Casein enzymic hydrolysate 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.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.2% Agar gel.

Colour and Clarity of prepared medium

Light amber coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 2.1% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

M1272: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Cultural Response			
<i>Enterobacter aerogenes</i> ATCC 13048	50-100	luxuriant	≥70%
<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	≥70%
<i>Salmonella Typhimurium</i> ATCC 14028	50-100	luxuriant	≥70%
<i>Salmonella Enteritidis</i> ATCC 13076	50-100	luxuriant	≥70%

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

- 1.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
- 2.International Organization for Standardization (ISO), 1988, Draft ISO/DIS 6222.

Revision : 1 / 2011

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