Tryptone Yeast Extract Broth (ISP Medium No. 1)

M356

Intended Use:

A general purpose enrichment medium for not particularly fastidious microorganisms.

Composition**

Ingredients	Gms / Litre
Tryptone	5.000
Yeast extract	3.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 8.0 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense into tubes or flasks or as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Tryptone Yeast Extract Broth is formulated as per International Streptomyces Project (4). Tryptone and yeast extract provide nitrogenous compounds, carbon, sulphur, vitamin B complex and trace elements, necessary for bacterial metabolism. With added carbohydrate and a pH indicator, it can also be used for fermentation studies.

Inoculate the tubes with the test organism and incubate at 30°C ± 2°C for upto 96 hours. Inoculate ISP Medium No. 2 (M424) or ISP Medium No. 4 (M359) with the test organisms by placing approximately 0.1 ml of the inoculum near the edge of the plate. Five parallel streaks across the plate are made from this 0.1 ml of inoculum followed by four perpendicular streaks. Incubate the plates. ISP Medium No. 1 is used as an enrichment medium for *Streptomyces* species.

Type of specimen

Food samples

Specimen Collection and Handling:

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (3). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Further biochemical tests must be carried out for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured clear solution without any precipitate

Reaction

Reaction of 0.8% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

Cultural characteristics observed after an incubation at 28-32°C for upto 4 days.

Organism	Growth

Escherichia coli ATCC 25922 (00013*)	luxuriant
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	luxuriant
Streptomyces lavendulae ATCC 8664	luxuriant
Streptomyces albus subsp *albus* ATCC 3004	luxuriant

* Corresponding WDCM numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, American Public Health Association, Washington, D.C.
4. Sherling E.B. and Gotlieb.,1966, International J.Systemic Bacteriol., 16:3.

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