T.A.T. Broth w/Tween 20

MU562

Intended Use:

Recommended for sterility testing of highly viscous or gelatinous substances such as salves, ointments and other cosmetic products, in accordance with USP.

Composition**

Ingredients	g / L
Tryptone	20.000
Lecithin	5.000

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 25.0 grams in 960 ml purified/distilled water and add 40 ml of Tween 20. Heat if necessary to dissolve the medium completely. Dispense into tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

T.A.T. Broth is prepared according to the formula recommended by United States Food and Drug Administration and United States Pharmacopoeia (1,2) for enrichment and further isolation and cultivation of gram-negative bacteria in cosmetics, tropical drugs and sterility testing of viscous or gelatinous substances.

Type of specimen

Pharmaceutical and Cosmetics samples for sterility testing.

Specimen Collection and Handling:

Prepare decimal dilutions of the sample to be tested from 10-1 to 10-6. Inoculate 1 gram (1 ml) sample and 1 ml of each dilution into 40 ml of T.A.T. Broth (3). After incubation subculture the growth on MacConkey Agar (MH081) and TSI Agar (MU021). 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 and serological tests must be carried out for further identification.

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

Off-white to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light yellow coloured clear to slightly opalescent solution

Cultural Response

Cultural characteristics observed with added Polysorbate 20 after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth
$ *Bacillus spizizenii* ATCC 6633 (00003*)	50-100	good-luxuriant
Candida albicans ATCC 10231 (00054*)	50-100	fair-good
^*Pseudomonas paraeruginosa* ATCC 9027 (00026*)	50-100	good-luxuriant
Salmonella Typhi ATCC 6539	50-100	good-luxuriant
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	50-100	good-luxuriant
Staphylococcus aureus subsp. *aureus* ATCC 6538 (00032*)	50-100	good- luxuriant

Key : *Corresponding WDCM numbers.

$ Formerly known as *Bacillus subtilis* subsp. *spizizenii* ^ Formerly known as *Pseudomonas aeruginosa*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order 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 (4,5).

Reference

1. Food and Drug Administration, 1969, Procedure for Examination of Tropical Drugs and Cosmetics.
2. The United States Pharmacopoeia-National Formulatory (USP-NF), 2022
3. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
5. 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.

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