**OXFORD LAB FINE CHEM LLP**
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Oxford
Range of
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# TECHNICAL DATA SHEET

# T.A.T. Broth Base
# (Tryptone-Azolectin-Tween Broth Base)

## Principle

**TAT Broth Base is an enrichment medium developed to isolate and cultivate microorganisms. TAT Broth Base conforms to the formula specified by US Pharmacopeia for use in Microbial Limit Tests. It is used for enrichment and further isolation and cultivation of gram-negative bacteria in cosmetics, tropical drugs and in the sterility testing of viscous or gelatinous substances. It consists of tryptone and azolectin. tryptone provides the nitrogen, vitamins, amino acids and carbon. Azolectin neutralize preservatives in the cosmetics or pharmaceutical products and allow the bacteria to grow easily. The media is fortified with Tween 20 for complete neutralization of preservatives.**
**Prepare serial 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 TAT Broth and after incubation, subculture the growth on MacConkey Agar.**

**Use: For sterility testing of highly viscous substances such as ointments, salves & other cosmetic products.**

## Contents*

| Ingredients | Gram/Litre |
|---|---|
| Tryptone | 20.00 |
| Azolectin | 5.00 |
| pH at 25˚C | 7.2 ±0.2 |

*** Formula adjusted for optimum performance and parameters**

**Directions: Dissolve 25.00 grams in 1000 ml distilled water, add 40 ml of tween 20. Heat to 50-60°C for 15-30 minutes with occasional agitation till media dissolve completely. Sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 min, cool it to 42-45 °C and inoculate test sample aseptically.**

## Specimens types analyzed

**Ointments and other cosmetic products, viscous or gelatinous pharmaceutical samples, clinical and nonclinical samples etc.**

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## Precautions to be taken

**These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.**

## Performance and Evaluation

**The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.**

## Quality Control

| | |
|---|---|
| **Appearance** | **Light tan colored free flowing, homogeneous powder** |
| **Reaction of 2.5% w/v aqueous solution containing 4%v/v tween 20** | **7.2 ±0.2 at 25 ˚C** |
| **pH** | **7.00- 7.40** |
| **Color and clarity of ready medium** | **Light amber color clear to slightly opalescent solution.** |
| **Growth Promotion properties** | **Best at ≤ 100 CFU at 32-37 ºC for 18-72 h** |
| **Indicative properties** | **Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h** |
| **Negative control** | **Performed using sterile distilled water** |

**Different Microbial Response**

| Organism | ATCC | Inoculum | Growth | Incubation Temperature | Incubation period |
|---|---|---|---|---|---|
| ***Bacillus subtilis*** | **6633** | **50-100** | **Luxurious** | **33-37 ºC** | **18-48 h** |
| ***Pseudomonas aeruginosa*** | **27853** | **50-100** | **Good** | **33-37 ºC** | **18-48 h** |
| ***Staphylococcus aureus*** | **25923** | **50-100** | **Good** | **33-37 ºC** | **18-48 h** |

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**Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.**

**Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.**

## Reference

1. **Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.**
2. ***British Pharmacopoeia*, (2011), The Stationery office British Pharmacopoeia**
3. ***Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.**
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5. **MacFaddin J. F., (1985), *Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria*, Vol. I, Williams and Wilkins, Baltimore**
6. **Orth, (1993), *Handbook of Cosmetic Microbiology*, Marcel Dekker, Inc., New York, N.Y.**

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