



## PRODUCT SPECIFICATION SHEET

### T.A.T. Broth Base (DM987)

#### Intended Use

T.A.T. Broth Base (DM987) is recommended for sterility testing of highly viscous or gelatinous substances such as salves, ointments and other cosmetic products.

#### Product Summary and Explanation

During manufacturing and subsequent use by consumers, cosmetics and pharmaceutical products are subject to contamination.<sup>(1)</sup> To make them self-sterilizing for vegetative bacteria, yeasts and moulds, and bacteriostatic or bactericidal for spores preservatives are used in aqueous products.<sup>(1)</sup> T.A.T. (Tryptone-Azolectin-Tween) Broth is prepared according to the formula recommended by United States Food and Drug Administration<sup>(2)</sup> 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 is especially adapted for the testing of cosmetics.

#### Principles of the Procedure

T.A.T. Broth contains casein enzymic hydrolysate which provides the nitrogen, vitamins, amino acids and carbon in T.A.T. Broth Base. Azolectin and polysorbate 20 neutralize preservatives in the cosmetics or pharmaceutical products, allowing bacteria to grow.

#### Formula / Liter

Ingredients	Gms / Liter
Casein enzymic hydrolysate	20.00
Azolectin	5.00
Final pH : 7.2 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

#### Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

#### Directions

1. Suspend 25 grams of the medium in 960ml of distilled water and add 40 ml of polysorbate 20.
2. Heat if necessary to dissolve the medium completely.
3. Dispense as desired. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.

#### Quality Control Specifications

Dehydrated Appearance	Off-white to yellow homogeneous free flowing powder
Prepared Medium	Light yellow coloured clear to slightly opalescent solution
Reaction of 2.5% Solution w/v aqueous solution containing 4%v/v polysorbate 20	pH : 7.2 ± 0.2 at 25°C
Gel Strength	Not Applicable



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

Sr. No.	Organisms	Results to be achieved	
		Inoculum (CFU)	Growth
1.	<i>Bacillus subtilis</i> ATCC 6633	50 -100	good-luxuriant
2.	<i>Candida albicans</i> ATCC 10231	50 -100	good-luxuriant
3.	<i>Pseudomonas aeruginosa</i> ATCC 27853	50 -100	fair-good
4.	<i>Salmonella Typhi</i> ATCC 6539	50 -100	good-luxuriant
5.	<i>Staphylococcus aureus</i> ATCC 25923	50 -100	good-luxuriant
6.	<i>Staphylococcus aureus</i> ATCC 6538	50 -100	good-luxuriant
7.	<i>Pseudomonas aeruginosa</i> ATCC 9027	50 -100	fair-good

The organisms listed are the minimum that should be used for quality control testing.

### Test Procedure

1. Prepare decimal dilutions of the sample to be tested from  $10^{-1}$  to  $10^{-6}$ .
2. Inoculate 1 gram (1 ml) sample and 1 ml of each dilution into 40 ml of T.A.T. Broth.<sup>(3)</sup>
3. After incubation, subculture the growth on MacConkey Agar (DM143) and TSI Agar (DM254).
4. Refer to appropriate references for standard test procedures.

### Results

Refer to appropriate references and test procedures for interpretation of results.

### Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

### Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

### Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

### Packaging

**Product Name :** T.A.T. Broth Base

**Product Code :** DM987

**Available Pack sizes :** 500gm

### References

1. Orth, 1993, Handbook of Cosmetic Microbiology, Marcel Dekker, Inc., New York, N.Y.
2. Food and Drug Administration, 1969, Procedure for Examination of Tropical Drugs and Cosmetics.
3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.



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### Further Information

For further information please contact your local MICROMASTER Representative.



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