

# TSA Letheen Agar

Cat. 1396

For the microbiological analysis of cosmetics

## Practical information

|              |             |
|--------------|-------------|
| Applications | Categories  |
| Detection    | General use |

Industry: Cosmetics

## Principles and uses

TSA Letheen Agar is a highly nutritious agar and it is recommended for use in the microbiological testing of cosmetics. It can be used to inactivate quaternary ammonium compounds and other preservatives when establishing the number of bacteria present in cosmetics and other materials.

Pancreatic digest of casein and papainic digest of soy bean provide nitrogen, vitamins, minerals and amino acids essential for growth. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Lecithin and Tween 80 neutralize quaternary ammonium compounds and partially neutralize the preservative system commonly found in cosmetics. Bacteriological agar is the solidifying agent.

The medium is also used for microbiological samples from surfaces that have been treated with disinfectants.

## Formula in g/L

|                             |    |                             |     |
|-----------------------------|----|-----------------------------|-----|
| Bacteriological agar        | 15 | Lecithin                    | 0,7 |
| Pancreatic digest of casein | 15 | Papainic digest of soy bean | 5   |
| Sodium chloride             | 5  | Tween 80                    | 5   |

Typical formula g/L \* Adjusted and/or supplemented as required to meet performance criteria.

## Preparation

Suspend 45,7 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into appropriate containers and sterilize in autoclave at 121 °C for 15 minutes.

## Instructions for use

- Inoculate on the surface.
- Incubate the tubes at 35±2 °C for 18-24 hours.
- Reading and interpretation of the results.

## Quality control

| Solubility | Appearance  | Color of the dehydrated medium | Color of the prepared medium | Final pH (25°C) |
|------------|-------------|--------------------------------|------------------------------|-----------------|
| w/o rests  | Fine powder | Beige                          | Amber, slightly opalescent   | 7,2 ± 0,2       |

## Microbiological test

Incubation conditions: (35±2 °C / 18-24 h).

| Microorganisms                        | Specification |
|---------------------------------------|---------------|
| Staphylococcus epidermidis ATCC 12228 | Good growth   |
| Salmonella typhimurium ATCC 14028     | Good growth   |
| Escherichia coli ATCC 25922           | Good growth   |

Staphylococcus aureus ATCC 25923  
Pseudomonas aeruginosa ATCC 27853

Good growth  
Good growth

## Storage

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Temp. Min.:2 °C  
Temp. Max.:25 °C

## Bibliography

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FIJA Bacteriological Analytical Manual (BMA] 1995. Microbiological Methods for cosmetics, Letheen Agar (modified]. Letheen Broth (modified))