



AATCC Bacteriostasis Agar

M231

AATCC Bacteriostasis Agar is used for the detection of antibacterial activity of fabrics.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	10.000
Beef extract	5.000
Sodium chloride	5.000
Agar	15.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 35 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates

Principle And Interpretation

AATCC Bacteriostasis Agar is used in accordance with the standard procedure (1, 2, 3). It may be used to carry stock cultures of *Escherichia coli* and *Staphylococcus aureus*. Also, it is used for the detection of antibacterial activity of fabrics.

Peptic digest of animal tissue and beef extract are sources of carbon, nitrogen, vitamins and minerals. Sodium chloride provides essential ions.

The test cultures of *Escherichia coli* and *Staphylococcus aureus* are grown in AATCC Bacteriostasis Broth (M221) for 24 hours. 1 ml of this culture is mixed with 150 ml of AATCC Bacteriostasis Agar and poured into the plate. After the agar solidifies, apply a circular sterile test fabric of 28.6 mm diameter onto the plate. Incubate at 35°C for 18 - 24 hours and observe the inhibition of growth around test fabric.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Amber coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 3.5% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

M231: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Cultural Response			
<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant	≥70%
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	good-luxuriant	≥70%
<i>Salmonella Typhi</i> ATCC 6539	50-100	good-luxuriant	≥70%

Staphylococcus aureus 50-100 good-luxuriant $\geq 70\%$
ATCC 6538

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on label.

Reference

1. Williams (Ed.), 1995, Official methods of Analysis of AOAC, 16th ed. AOAC, Washington D.C.
- 2 Tech. Manual of AATCC, 1985, Vol. 61, AATCC, Research Triangle Park, N.C.
- 3 Ruuhle and Brewer, 1931, USFDA Methods of Testing Antiseptics and Disinfectants, USDA Circ.:198.

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