

AATCC Bacteriostasis HiVeg™ Agar / Broth

MV231 / MV221

AATCC Bacteriostasis HiVeg Agar is used for the detection of antibacterial activity of fabrics while broth is used for routine antibacterial testing of antiseptics and disinfectants.

Composition :**

Ingredients	MV231	MV221
	Grams/Litre	Grams/Litre
HiVeg peptone	10.00	10.00
HiVeg extract	5.00	5.00
Sodium chloride	5.00	5.00
Agar	15.00	-

Final pH (at 25°C) 7.2 ± 0.2 6.8 ± 0.2

** Formula adjusted, standardized to suit performance parameters

Directions :

Suspend 35 grams of MV231 or 20 grams of MV221 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.

Principle and Interpretation :

AATCC Bacteriostasis HiVeg Agar and AATCC Bacteriostasis HiVeg Broth are the modifications of AATCC Bacteriostasis Agar/Broth where the animal based peptones are substituted by vegetable peptones thus making the media BSE/TSE risk free. AATCC Bacteriostasis Agar is used in accordance with the standard procedure (1, 2, 3). AATCC Bacteriostasis Broth is useful for subcultures in phenol coefficient and dilution tests and tests of bacteriostatic, germicidal, sporidial activity (1) and also as a base for the preparation of AATCC Bacteriostasis Agar (2). AATCC Bacteriostasis Agar 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. AATCC Bacteriostasis HiVeg Agar/Broth, like the conventional media serves the same above mentioned purposes.

The test cultures of *Escherichia coli* and *Staphylococcus aureus* are grown in AATCC Bacteriostasis HiVeg Broth for 24 hours. 1 ml of this culture is mixed with 150 ml of AATCC Bacteriostasis HiVeg 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 35-37°C for 18 - 24 hours and observe the inhibition of growth around test fabric.

HiVeg peptone and HiVeg extract provides nitrogenous nutrients and sodium chloride maintains the osmotic balance of the medium.

Quality Control:**Appearance of Powder :**

Yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

Product Profile :

Vegetable based (Code MV)©	Animal based (Code M)
MV231/MV221 HiVeg peptone HiVeg extract	M231/M221 Peptic digest of animal tissue Beef extract

Recommended for : Detection of antibacterial activity of fabrics and antibacterial testing of antiseptics and disinfectants.

Reconstitution : (MV231) : 35.0 g/l

(MV221) : 20.0 g/l

Quantity on preparation (500g) : (MV231) : 14.28 L

(500g) : (MV221) : 25.0 L

pH (25°C) : (MV231) : 7.2 ± 0.2

(MV221) : 6.8 ± 0.2

Supplement : None

Sterilization : 121°C / 15 minutes.

Storage : Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

Gelling :

Firm, comparable with 1.5% Agar gel of MV231.

Colour and Clarity :

Amber coloured, clear to slightly opalescent gel forms in petri plates, clear solution in tubes.

Reaction :

Reaction of 3.5% w/v aqueous solution of MV231 is pH 7.2 ± 0.2 at 25°C.

Reaction of 2.0% w/v aqueous solution of MV221 is pH 6.8 ± 0.2 at 25°C.

Cultural Response :

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

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
<i>Escherichia coli</i> (25922)	10 ²	luxuriant	> 70%
<i>Staphylococcus aureus</i> (6538)	10 ²	luxuriant	> 70%
<i>Pseudomonas aeruginosa</i> (27853)	10 ²	luxuriant	> 70%
<i>Salmonella</i> serotype Typhi (6539)	10 ²	luxuriant	> 70%

Lack of bacterial growth indicates that the fabric has antibacterial activity.

References :

- Williams (Ed.), 2005, Official methods of Analysis of AOAC, 18th ed. AOAC, Washington D.C.
- Tech. Manual of AATCC, 1985, Vol. 61, AATCC, Research Triangle Park, N.C.
- Ruuhle and Brewer, 1931, USFDA Methods of Testing Antiseptics and Disinfectants, USDA Circ.:198.