

**Antibiotic Assay Medium I****MM798**

Antibiotic Assay Medium I is used for the microbiological assay of Bleomycin using *Mycobacterium smegmatis* , as a test organism, in accordance with Indian Pharmacopoeia.

**Composition\*\***

Ingredients	Gms / Litre
Peptone	10.000
Beef extract	10.000
Sodium chloride	3.000
Agar	17.000
pH after sterilization	7.0±0.1

\*\*Formula adjusted, standardized to suit performance parameters

**Directions**

Suspend 40 grams in 1000 ml purified/distilled water containing 10 grams glycerine. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

*Advice : Recommended for the microbiological assay of Bleomycin .*

**Principle And Interpretation**

This medium is formulated in accordance with IP and CFR (1,2). This medium is employed widely as base agar for agar diffusion assay of Bleomycin using *Mycobacterium smegmatis* . The nutrients essential for growth of test organism is provided by peptone and beef extract in this medium. Agar provides excellent solid substratum for support and overlaying of seed agar, for the assay of Bleomycin. Addition of glycerine is important for provision of carbon to the test organism.

To perform the antibiotic assay the Base Agar should be prepared on the same day as the test. For the cylinder method, a base layer of 21 ml is required. Once the base medium has solidified, seed layer inoculated with the standardized culture can be overlaid. Even distribution of the layer is important.

**Quality Control****Appearance**

Cream to yellow coloured homogeneous free flowing powder

**Gelling**

Firm, comparable with 1.7% agar gel.

**Colour and Clarity of prepared medium**

Medium amber coloured clear to slightly opalescent gel forms in Petri plates.

**pH**

pH of 4.0% w/v aqueous solution containing 1% glycerine after sterilization. pH : 7.0±0.1

**Cultural Response**

MM798: Cultural characteristics observed after an incubation at 36-37.5°C for 48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Antibiotics assayed		
<i>Mycobacterium smegmatis</i> ATCC 607	50-100	luxuriant	≥70%	Bleomycin		

**Reference**

1. Indian Pharmacopoeia 2007, Ministry of Health and Family welfare, Government of India, New Delhi.
2. Tests and Methods of Assay of Antibiotics and Antibiotic containing Drugs, FDA, CFR, 1983 Title 21, Part 436, Subpart D, Washington, D.C.: U.S. Government Printing Office, paragraphs 436, 100-436, 106, p. 242-259, (April 1).

**Storage and Shelf Life**

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