



Antibiotic Assay Medium G

M553

Antibiotic Assay Medium G is used for the microbiological assay of Bleomycin sulphate using *Mycobacterium smegmatis* as a test organism.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue (Peptone)	10.000
Meat extract	10.000
Sodium chloride	3.000
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 38 grams in 1000 ml purified/distilled water containing 10ml glycerol. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool and dispense as desired.

Advice : Recommended for the microbiological assay of Bleomycin sulphate

Principle And Interpretation

This medium is formulated in accordance to European and British Pharmacopoeia (1,2). This medium is employed widely as base agar for agar diffusion assay of Bleomycin using *Mycobacterium smegmatis*. It is also used for preparing the inoculum of *Mycobacterim smegmatis* for assay.

The nutrients essential for growth of test organism is provided by peptic digest of animal tissue and meat extract in this medium. Agar provides excellent solid substratum for support and over layering of seed agar, for the assay of Bleomycin. Addition of glycerol 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 homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light yellow coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 3.8% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

M553: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours .

Organism	Inoculum (CFU)	Growth	Recovery	Antibiotics assayed
<i>Mycobacterium smegmatis</i> ATCC 607	50-100	Luxuriant	>=50%	Bleomycin sulphate

Storage and Shelf Life

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

Reference

1. British Pharmacopoeia, 2011, The Stationery Office, British Pharmacopoeia
2. European Pharmacopoeia, 2011, European Department, for the Quality of Medicines.

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