



Antibiotic Assay Medium I

M1847B

Intended Use:

Recommended for the microbiological turbidimetric assay of Apramycin using *Salmonella cholerasuis* as a test organism in accordance with BP 2016.

Composition**

Ingredients	Gms / Litre
D-Glucose	10.000
Yeast extract	2.000
Tryptone	6.000
Final pH	8.0

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 18 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Dispense into sterile tubes or flasks or as desired.

Principle And Interpretation

This medium is formulated in accordance to British Pharmacopoeia (1). This medium is employed for turbidimetric assay of Apramycin, an antibiotic of the aminocyclitol group, using *Salmonella cholerasuis*. Turbidimetric methods for determining the potency of antibiotics are inherently more accurate and more precise than comparable agar diffusion procedures. Essential nutrients for growth of test organism is provided by Tryptone and yeast extract in this medium. D-Glucose serves as source of carbon to the test organism. Turbidimetric antibiotic assay is based on the change or inhibition of growth of a test microorganism in a liquid medium containing a uniform concentration of an antibiotic. Use of this method is appropriate only when test samples are clear.

Type of specimen

Pharmaceutical samples

Specimen Collection and Handling

For pharmaceutical samples follow appropriate techniques for handling specimens as per established guidelines (1). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Freshly prepared plates must be used or it may result in erroneous results.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow coloured homogeneous free flowing powder

Colour and Clarity of prepared medium

Light yellow coloured clear solution in tubes

Reaction

Reaction of 1.8% w/v aqueous solution. pH : 8.0

pH

8.0

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 12 - 24 hours.

Organism	Inoculum (CFU)	Growth	Serial dilution with
<i>Salmonella Choleraesuis</i> <i>ATCC 12011</i>	50-100	luxuriant	Apramycin

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and use freshly prepared medium. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

Reference

1. British Pharmacopoeia, 2016, The Stationery Office, British Pharmacopoeia
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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Disclaimer :

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