



## Antibiotic Assay Medium B (ME1346/M1346B)

MAP1346

### Intended Use:

Recommended for microbiological assay of colistimethate sodium using *Bordetella bronchiseptica* ATCC 4617 & *E.Coli* ATCC 10536.

### Composition\*\*

Ingredients	g/ L
Tryptone #	17.000
Soya peptone ##	3.000
Sodium chloride	5.000
Dipotassium hydrogen phosphate	2.500
Glucose monohydrate	2.500
Agar	15.000
pH after sterilization	7.3±0.1

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

# Pancreatic digest of casein

## Papaic digest of soyabean

### Directions

Suspend 44.77 grams (equivalent weight of dehydrated medium per litre) in 1000 ml R-water/purified/distilled water with 10 ml polysorbate 80. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates. Adjust the pH of the medium, using freshly prepared buffer solution as recommended by the European pharmacopoeia for the antibiotic assayed.

### Principle And Interpretation

Antibiotic Assay Medium B is prepared according to European Pharmacopoeia & British Pharmacopoeia (1,2) and is recommended for the assay of Colistimethate sodium using *Bordetella bronchiseptica* and *Escherichia coli* as the test organism. Combination of tryptone and soya peptone provides essential nutrients for the growth of test organisms. Glucose monohydrate provides fermentable source of carbon, and enhances the growth of test organisms. Phosphates in the medium enhance buffering action and sodium chloride maintains osmotic equilibrium. Freshly prepared plates should be used for antibiotic assays.

### Type of specimen

Antibiotics as per EP & BP

### Specimen Collection and Handling

Test organisms are inoculated in sterile seed agar cooled to 40-45°C and spread evenly over the surface of solidified base agar. All conditions in the microbiological assay must be controlled carefully. The use of standard culture media in the test is one of the important steps for good results. 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. Under certain circumstances, the in vitro results of antibiotic susceptibility may not show the same in vivo.
2. Freshly prepared plates should be used for antibiotic assays.
3. Inoculum density may affect the zone size. Heavy inoculum may result in smaller zones or too less inoculum may result in bigger zones.

## 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 homogeneous free flowing powder

### Gelling

Firm, comparable with 1.5% Agar gel

### Colour and Clarity of prepared medium

Light amber coloured clear to slightly opalescent gel forms in Petri plates

### pH

7.20-7.40

### Growth promotion test

Growth promotion is carried in accordance with EP/BP.

### Cultural Response

Cultural characteristics observed after an incubation at 35-39°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Antibiotics assayed
<i>Bordetella bronchiseptica</i> ATCC 4617	50-100	luxuriant	≥70%	Colistimethate sodium, Colistin sulphate, Polymyxin B sulphate
<i>Escherichia coli</i> ATCC 10536	50-100	luxuriant	≥70%	Colistimethate sodium, Colistin sulphate

## 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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

## Reference

1. European Pharmacopoeia, 2022, 10 th volume, European Directorate for the quality of medicines & Healthcare.
2. The British Pharmacopoeia, 2022, Medicines and Healthcare products Regulatory Agency.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition
4. 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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