



Antibiotic Assay Medium H

ME1665

Intended Use:

Recommended for turbidimetric assay of Teicoplanin using *Bacillus subtilis* as a test organism in accordance with EP.

Composition**

Ingredients	g/ L
Peptone	5.000
HM peptone B #	3.000
Agar	15.000
Final pH (at 25°C)	7.9±0.1

**Formula adjusted, standardized to suit performance parameters

Equivalent to Beef extract powder

Directions

Suspend 23.0 grams in 1000 ml R-water/purified/distilled water. 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 or dispense as desired.

Principle And Interpretation

This medium is formulated in accordance with European Pharmacopoeia (1). This medium is employed in the microbiological assay of Teicoplanin using *Bacillus subtilis*. Essential nutrients for growth of test organism are provided by Peptone and HM peptone B powder in this medium. Agar provides excellent medium for antibiotic diffusion and gives well defined zones of inhibition. Freshly prepared plates should be preferably used for assaying antibiotics. Test organisms is inoculated in sterile seed agar pre-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. One of the critical and important step for obtaining good results is use of appropriate standard culture media.

Type of specimen

Antibiotics as per European Pharmacopoeia

Specimen Collection and Handling

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. Under certain circumstances, the in vitro results of antibiotic susceptibility may not show the same in vivo.
2. Inoculum density may affect the zone size. Heavy inoculum may result in smaller zones or too less inoculum may result in bigger zones.
3. Freshly prepared plates should be used for antibiotic assays.

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

Please refer disclaimer Overleaf.

Colour and Clarity of prepared medium

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

pH

pH of 2.8% w/v aqueous solution at 25°C.

pH

7.80-8.00

Cultural Response

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

Organism	Inoculum (CFU)	Growth	Recovery	Antibiotics assayed
** <i>Bacillus spizizenii</i> ATCC 6633 (00003*)	50-100	luxuriant	>=70%	Teicoplanin

Key : *Corresponding WDCM numbers.

**Formerly known as *Bacillus subtilis* subsp. *spizizenii*

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 (2,3).

Reference

1. European Pharmacopoeia, 2022, 10 th volume, European Directorate for the quality of medicines & Healthcare.
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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