

Technical Information

Antibiotic MiVeg Assay Medium No. 32

Product Code : VM2141

Application:- Antibiotic MiVeg Assay Medium No. 32 is recommended for preparing inoculum of *Bacillus subtilis* during assay of Dihydrostreptomycin and Vancomycin.

Composition

Ingredients	Gms / Litre
MiVeg peptone	6.000
MiVeg hydrolysate	4.000
Yeast extract	3.000
MiVeg extract	1.500
Dextrose	1.000
Manganese sulphate	0.300
Agar	15.000
Final pH (at 25°C)	6.6±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Antibiotic MiVeg Assay Medium No. 32 is prepared by vegetable peptones instead of animal peptones, which makes the medium free from BSE/TSE risks. This can serve the same purpose of Antibiotic Assay Medium No. 32 that is formulated in accordance to FDA (1) and is a modification of Antibiotic assay Medium No.1. This medium is used to develop inoculum of *Bacillus subtilis* for antibiotic assay.

MiVeg peptone, MiVeg hydrolysate, yeast extract and MiVeg extract supplies essential nutrients, vitamins, mineral, trace elements and growth factors. Dextrose in the medium stimulates the growth of the test microorganism as it provides carbon source. Manganese sulphate in this medium facilitates the sporulation and growth of *Bacillus subtilis* (2,3,4), which is generally used as test organisms for plate assay of Dihydrostreptomycin and Vancomycin.

Methodology

Suspend 30.8 grams of powder media in 1000 ml purified/distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Yellow clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 3.08 % w/v aqueous solution at 25°C pH: 6.6±0.2

pH range

6.40-6.80



Dehydrated Culture Media
Bases / Media Supplements

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Antibiotics assayed
<i>Bacillus subtilis</i> ATCC 6633	50-100	good -luxuriant	>=70%	Dihydrostreptomycin, Vancomycin

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. 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).
2. Vasantha & Freese, 1979, J.Gen.Microbiol. 112:329-336
3. Charney, J., Fisher, W.P. and Hegarty, C.P. 1951. J. Bacteriol. 62:145.
4. Curran, H.R. and Evans, F.R. 1954. J. Bacteriol. 67: 489.

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- User must ensure suitability of the product(s) in their application prior to use.
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