

Technical Information

Antibiotic MiVeg Assay Medium No.41

Product Code : VM2144

Application:- Antibiotic MiVeg Assay Medium No.41 is recommended for the microbiological assay of Thiostrepton using *Streptococcus faecium*.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	9.000
Dextrose	20.000
Yeast extract	5.000
Sodium chloride	10.000
Dipotassium hydrogen phosphate	1.000
Monopotassium phosphate	1.000
Final pH (at 25°C)	6.8±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Antibiotic MiVeg Assay medium No. 40 is prepared by using of vegetable peptones instead of animal peptones, so the medium becomes BSE-TSE risks free. This medium serves the same purpose of Antibiotic Assay Medium No. 41(1) . It is recommended for turbidimetric microbiological assay of thiostreptone, a polypeptide antibiotic. Grove and Randall have elucidated the antibiotic assays and media in their comprehensive treatise on antibiotic assays (2).

MiVeg hydrolysate and yeast extract provides essential amino acids, mineral and growth factors in this medium. Dextrose provides carbon and energy source for enhancing the growth of test organism. Phosphate maintains good buffering system in the medium. Sodium citrate provides additional source of carbon and energy and promote enhanced growth of the test organism.

Turbidimetric antibiotic assay is based on the change or inhibition of growth of a test microorganisms in a liquid medium containing a uniform concentration of an antibiotic. The amount of growth is determined by measuring the light transmittance using spectrophotometer after incubation of the test organism in the working dilutions of the antibiotics,. The concentration of antibiotic is determined by comparing amounts of growth obtained with that is given by the reference standard solutions. Use of this method is appropriate only when test samples are clear.

Methodology

Suspend 4.6 grams of powder media in 1000 ml purified/distilled water. Mix thoroughly. Heat 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

Colour and Clarity of prepared medium

Light yellow coloured clear solution in tubes

Reaction

Reaction of 4.6 % w/v aqueous solution at 25°C pH: 6.8±0.2

pH range

6.60-7.00



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	Serial dilution with
<i>Enterococcus hirae</i> ATCC 10541	50-100	luxuriant	Thiostrepton

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. United States Pharmacopoeia 2011, USP 34/ NF 29, US Pharmacopoeial Convention Inc, Rockville, MD.
2. Grove and Randall, 1955; Assay methods of Antibiotics Medical Encyclopedia, Inc, New York.

Disclaimer :

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