



# Technical Data

## Antibiotic HiVeg Assay Medium No.41

MV1144

Antibiotic HiVeg Assay Medium No.41 is used for the microbiological assay of Thiostrepton using *Streptococcus faecium* as the test organism

### Composition\*\*

Ingredients	Gms / Litre
HiVeg hydrolysate	9.000
Dextrose	20.000
Yeast extract	5.000
Sodium citrate	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

### Directions

Suspend 46 grams in 1000 ml purified/distilled water. Heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

### Principle And Interpretation

Antibiotic HiVeg Assay medium No. 40 is prepared by incorporation of vegetable peptones in place of animal peptones, making the medium, BSE-TSE risks free. This medium can be used for 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).

Essential amino acids, mineral and growth factors are supplied by HiVeg hydrolysate and yeast extract in this medium. Dextrose provides carbon and energy source for enhancing the growth of test organism. Good buffering action is maintained by phosphates 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. After incubation of the test organism in the working dilutions of the antibiotics, the amount of growth is determined by measuring the light transmittance using spectrophotometer. 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.

*Note: For Antibiotic Assay Methods and Selection of Antibiotic HiVeg Assay Medias Refer Section Antibiotic HiVeg Assay Media.*

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Colour and Clarity

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

6.60-7.00

#### Cultural Response

MV1144: Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 24 hours.

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Organism	Inoculum (CFU)	Growth	Serial dilution with
<b>Cultural Response</b> <i>Enterococcus hirae</i> ATCC 10541	50-100	luxuriant	Thiostrepton

### Storage and Shelf Life

Store below 30°C in tightly closed container and use freshly prepared medium. Use before expiry date on label.

### Reference

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.

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