



## Antibiotic Assay Medium No. 41

MU1144

Antibiotic Assay Medium No. 41 is used for the microbiological assay of Thiostreptone using *Enterococcus hirae* as the test organism in accordance with United States Pharmacopoeia.

### Composition\*\*

Ingredients	Gms / Litre
Tryptone #	9.000
Yeast extract	5.000
Dextrose	20.000
Dibasic potassium phosphate	1.000
Monobasic potassium phosphate	1.000
Sodium citrate	10.000
pH after sterilization	6.8±0.1

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

#Pancreatic digest of casein

### Directions

Suspend 46.0 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense into tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

### Principle And Interpretation

This medium is formulated in accordance with USP(1). This medium is used for turbidimetric microbiological assay of Thiostreptone, a polypeptide antibiotic.

Essential amino acids, mineral and growth factors are supplied by tryptone 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 microorganism 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 given by the reference standard solutions. Use of this method is appropriate only when test samples are clear.

### Quality Control

#### Appearance

Cream to yellow coloured homogeneous free flowing powder

#### Colour and Clarity of prepared medium

Light yellow coloured clear solution without any precipitate

#### Reaction

Reaction of 4.6% w/v aqueous solution. pH : 6.8±0.1

#### pH

6.70-6.90

#### Cultural Response

MU1144: Cultural characteristics observed after an incubation at 36-37.5°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Serial dilution with
<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 the label

## Reference

1. United States Pharmacopoeia / National Formulary 2016, US Pharmacopoeial Convention, Inc., Rockville, MD.

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### Disclaimer :

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