



## Antibiotic assay medium No. 40

MU1143

Antibiotic assay medium No. 40 is used in microbiological assay of Thiostrepton using *Enterococcus hirae* as test organism in accordance with United States Pharmacopoeia.

### Composition\*\*

Ingredients	Gms / Litre
Polypeptone	5.000
Yeast extract	20.000
Dextrose	10.000
Monobasic potassium phosphate	2.000
Polysorbate 80	0.100
Agar	10.000
pH after sterilization	6.7±0.2

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

### Directions

Suspend 47.1 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

### Principle And Interpretation

This medium is formulated in accordance to USP (1). This medium is used as maintenance medium for test organism *Enterococcus hirae* ATCC 10541 used for assay of Thiostrepton. Essential amino acids, mineral and growth factors are supplied by polypeptone and yeast extract in this medium. Dextrose functions as carbon and energy source for enhancing the growth of test organism. During maintenance of the test organisms, good buffering action is provided by phosphates in the medium. Incorporation of polysorbates reduces the surface tension, maintaining uniform suspension of cells and can also neutralize phenolic compounds in the test sample, if any.

### Quality Control

#### Appearance

Cream to yellow coloured homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.0% Agar gel

#### Colour and Clarity of prepared medium

Light amber coloured slightly opalescent gel forms in Petri plates.

#### Reaction

Reaction of 4.71% w/v aqueous solution. pH : 6.7±0.2

#### pH

6.50-6.90

#### Growth Promotion Test

As per United States Pharmacopoeia

#### Cultural Response

MU1143: Cultural characteristics observed after an incubation at 36-37.5°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Antibiotics assayed
<i>Enterococcus hirae</i> ATCC 10541	50-100	luxuriant	≥70%	Thiostrepton

### Storage and Shelf Life

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

## Reference

1. United States Pharmacopoeia 2011 (USP34/NF29), US Pharmacopoeial Convention, Inc., Rockville, MD.

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### Disclaimer :

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