



Antibiotic Assay Medium No. 40

M1143

Antibiotic assay medium No. 40 is used in microbiological assay of Thiostrepton using *Enterococcus hirae* as test organism.

Composition**

| Ingredients | Gms / Litre |
|--|-------------|
| Yeast extract | 20.000 |
| Peptic digest of animal tissue (Peptone) | 2.500 |
| Dextrose | 10.000 |
| Potassium dihydrogen phosphate | 2.000 |
| Polysorbate 80 | 0.100 |
| Casein enzymic hydrolysate | 2.500 |
| Agar | 10.000 |
| Final pH (at 25°C) | 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. Dispense and 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 used as maintenance medium for test organism *Enterococcus hirae* ATCC 10541 used for assay of Thiostrepton. It is recommended by USP (1). Essential amino acids, mineral and growth factors are supplied by peptic digest of animal tissue, casein enzymic hydrolysate 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 maintained by phosphates in the medium. Incorporation of polysorbates reduces the surface tension, maintaining uniform suspension of cells and also can neutralize phenolic compounds in the test sample, if any.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.0% Agar gel.

Colour and Clarity of prepared medium

Light amber coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 4.71% w/v aqueous solution at 25°C. pH : 6.7±0.2

pH

6.50-6.90

Cultural Response

M1143: Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 24 hours.

| Organism | Inoculum (CFU) | Growth | Recovery | Antibiotics assayed |
|--------------------------------------|----------------|-----------|----------|---------------------|
| <i>Enterococcus hirae</i> ATCC 10541 | | luxuriant | ≥70% | 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 2009,US Pharmacopoeial Convention, Inc., Rockville, MD.

Revision : 2 / 2015

Disclaimer :

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