



Technical Data

Antibiotic Assay Medium No. 40

M1143

Intended Use:

Recommended for the microbiological assay of Thiostrepton using *Enterococcus hirae* (*Streptococcus faecalis*) as the test organism.

Composition**

Ingredients	Gms / Litre
Yeast extract	20.000
Peptone	2.500
Tryptone	2.500
Dextrose (Glucose)	10.000
Potassium dihydrogen phosphate	2.000
Polysorbate 80 (Tween 80)	0.100
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. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates or as desired.

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 (3). Essential amino acids, mineral and growth factors are supplied by Peptone, Tryptone 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.

Type of specimen

Pharmaceutical sample

Specimen Collection and Handling

For pharmaceutical sample samples follow appropriate techniques for handling specimens as per established guidelines (3). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Freshly prepared medium plates must be used or it may result in erroneous results.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

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

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 (00011*)		luxuriant	>=70%	Thiostrepton

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and use freshly prepared medium. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Editi
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual Clinical Microbiology, 11th Edition. Vol. 1.
3. United States Pharmacopoeia 2019, US Pharmacopoeial Convention, Inc., Rockville, MD.

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Disclaimer :

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