



Glucose Yeast Extract Agar

M963

Glucose Yeast Extract Agar is used for enumeration and cultivation of Lactobacilli in pharmaceutical preparations.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	5.000
Yeast extract	5.000
Glucose	2.000
Monopotassium phosphate	0.500
Dipotassium phosphate	0.500
Magnesium sulphate	0.300
Sodium chloride	0.010
Manganese sulphate	0.010
Zinc sulphate	0.0016
Copper sulphate	0.0016
Cobalt sulphate	0.0016
Agar	15.000

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 28.32 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

Glucose Yeast Extract Agar is prepared according to the formula described by Evans and Niven (1) and Rogosa et al (2) and is used for enumeration and cultivation of Lactobacilli in pharmaceutical preparations.

The medium contains a variety of salts like sulphates, phosphates to support the growth of Lactobacilli. Necessary nitrogenous nutrients for Lactobacilli are provided by peptic digest of animal tissue and yeast extract. Glucose is the source of fermentable carbohydrate. The metallic salts are sources of ions essential for the replication of lactic acid bacteria.

Quality Control

Appearance

Light yellow to beige homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Yellow coloured, clear to slightly opalescent gel forms in Petri plates

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery
Cultural Response			
<i>Lactobacillus acidophilus</i> ATCC 4356	50-100	good-luxuriant	>=50%
<i>Lactobacillus bulgaricus</i> ATCC 11842	50-100	good-luxuriant	>=50%
<i>Lactobacillus casei</i> ATCC 9595	50-100	good-luxuriant	>=50%

Storage and Shelf Life

Store below 30°C in tightly closed container and prepared medium at 2-8°C. Use before expiry period on the label.

Reference

- 1.Evans and Niven, 1951, J. Bacteriol., 62:599.
- 2.Rogosa M., Mitchell J. A. and Wiseman R. F., 1951, J. Bacteriol., 62 :132.
- 3.Seppo Salminen, Atte von Wright and Arthur Ouweh and, Lactic Acid Bacteria., Microbiological and Functional Aspects, 3rd Ed., Marcel and Dekker. NY. Basel.

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