Glucose Yeast Peptone Agar

M757

Intended Use:

Recommended for isolation of yeasts from soil specimens.

Composition**

Ingredients	Gms / Litre
Peptone	10.000
Yeast extract	5.000
Dextrose (Glucose)	20.000
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 50.0 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

Yeasts are unicellular organisms that reproduce by budding. Their microscopic and morphological features usually appear similar for different genera and are not particularly helpful in their isolation in pure culture. Glucose Yeast Peptone Agar is formulated as described by Subba Rao (4) with a slight modification in agar concentration for isolating yeasts from soil specimens. This is a highly nutritious medium, which may be used not only for isolating yeasts but also for isolating some fastidious microorganisms. Yeasts grow well on a minimal medium containing only dextrose and salts. The addition of protein and yeast cell extract hydrolysates allows faster growth so that during exponential or log-phase growth, doubling time of 90 minutes is observed (1).

Peptone provides nitrogenous nutrients especially the amino acids and peptides and yeast extract supplies vitamin B complex. Dextrose is the readily available source of energy and a good carbohydrate source for yeasts.

Type of specimen

Soil samples.

Specimen Collection and Handling

For soil samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (4). 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. Some species may show poor growth due to nutritional variations.

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 1.5% Agar gel

Colour and Clarity of prepared medium

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

Reaction
Reaction of 5.0% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH
6.80-7.20

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

Organism	Inoculum (CFU)	Growth	Recovery
Saccharomyces cerevisiae ATCC 9763 (00058*)	50-100	luxuriant	>=70%

Key: * Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. 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 (2,3).

Reference

1. Ausubel, Brent, Kingston, Moore, Seidman, Smith and Struhl, 1994, Current Protocols in Molecular Biology, Current Protocols, Brooklyn, N.Y.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. Subba Rao N. S., 1977, Soil Microorganisms and Plant Growth, Oxford and IBH Publishing Co., New Delhi.

Revision : 02/2021