Glucose Yeast Extract Acetate Broth

M964

Intended Use:

Recommended for cultivation of Lactobacilli

Composition**

Ingredients	Gms / Litre
Sodium acetate	10.000
Peptone	10.000
Yeast extract	10.000
Dextrose (Glucose)	10.000
Dipotassium hydrogen phosphate	0.250
Potassium dihydrogen phosphate	0.250
Magnesium sulphate	0.100
Ferrous sulphate	0.005
Manganese sulphate	0.005
Sodium chloride	0.005
Final pH (at 25°C)	6.9±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 40.61 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Dispense as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Glucose Yeast Extract Acetate Broth is prepared by slight modification of the formula described by Evans and Niven (1) and Rogosa et al (2) and is used for enumerating Lactobacilli in pharmaceutical preparations.

It contains a variety of salts like sulphates, phosphates to support the growth of Lactobacilli. Necessary nitrogenous nutrients for Lactobacilli are provided by peptone 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. Sodium acetate inhibits Streptococci, moulds and many other organisms.

Type of specimen

Food and dairy samples; Pharmaceutical samples

Specimen Collection and Handling:

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (3,8,10). 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. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.

Performance and Evaluation

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

Quality Control

Appearance

Cream to yellow coloured homogeneous free flowing powder

Colour and Clarity of prepared medium
Light yellow coloured clear solution without any precipitate.
Reaction
Reaction of 4.06% w/v aqueous solution at 25°C. pH : 6.9±0.2
pH
6.70-7.10
Cultural Response
Cultural characteristics observed after an incubation at 35 - 37°C for 24 - 48 hours .

Organism	Growth
Lactobacillus acidophilus ATCC 4356 (00098*)	luxuriant
Lactobacillus delbrueckii subsp. *bulgaricus* ATCC 11842 (00102*)	luxuriant
#Lactobacillus rhamnosus ATCC 9595	luxuriant
Lactobacillus leichmannii ATCC 4797	luxuriant
Lactobacillus plantarum ATCC 8014	luxuriant

Key: * Corresponding WDCM numbers. # Formerly known as *Lactobacillus casei*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°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 (3,4).

Reference

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed.,Washington D.C.
2. Evans and Niven, 1951, J. Bact., 62:599.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. 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.
5. Rogosa M., Mitchell J.A. and Wiseman R.F., 1951, J. Bact., 62:132.
6. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
7. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.

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