Dextrose Broth

M044

Intended Use:

Recommended for cultivation of wide variety of microorganisms.

Composition**

Ingredients	Gms / Litre
Tryptose	10.000
HM peptone B#	3.000
Dextrose (Glucose)	5.000
Sodium chloride	5.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Beef extract

Directions

Suspend 23 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense into tubes or flasks or as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Dextrose in culture media serves as a source of energy. Dextrose Broth is useful when the organism has to be revived from small inocula. Dextrose Broth can also be used for anaerobic growth by the addition of 0.1- 0.2% Agar. Agar, thus added, helps to disperse the growth formed and also expel the CO_2 formed (3). Facultatively aerobic organisms tend to grow near the surface, in upper zone of the tube. Dextrose Broth is used for antibiotic sensitivity testing using the tube dilution method (4). Sensitivity testing of neomycin and chlortetracycline is better done using this medium.

HM peptone B and tryptose serve as sources of nitrogenous compounds, sulphur, carbon, vitamins and minerals. Dextrose is an energy source. Sodium chloride maintains the osmotic equilibrium of the medium.

Type of specimen

Food samples

Specimen Collection and Handling:

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (5).
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.This medium is general purpose medium and may not support the growth of fastidious organisms.

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

Colour and Clarity of prepared medium

Light yellow coloured, clear solution in tubes

Reaction

Reaction of 2.3% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

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

Organism	Inoculum (CFU)	Growth	Gas	Growth (with 0.1% Agar)
Escherichia coli ATCC 25922 (00013*)	50-100	good-luxuriant	positive reaction	good-luxuriant
Neisseria gonorrhoeae ATCC 19424	50-100	good-luxuriant	negative reaction	good-luxuriant
Neisseria meningitidis ATCC 13090	50-100	good-luxuriant	negative reaction	good-luxuriant
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	50-100	good-luxuriant	negative reaction	good-luxuriant
Streptococcus pyogenes ATCC 19615	50-100	good-luxuriant	negative reaction	good-luxuriant
Streptococcus pneumoniae ATCC 6305	50-100	good-luxuriant	negative reaction	good-luxuriant

Key : *Corresponding WDCM numbers.

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 (1,2).

Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. 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.
3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
4. Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore Walsbren and Dunnette A., 1951, Am. J. Clin. Path., 21:884.
5. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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