



DEV Glucose Broth

M1355

Intended Use:

Recommended for detection of microbial decomposition of glucose.

Composition**

Ingredients	Gms / Litre
HM peptone	10.000
HM extract	3.000
Sodium chloride	5.000
Dextrose (Glucose)	10.000
Bromo cresol purple	0.020
Final pH (at 25°C)	7.4±0.1

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 28.02 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely.

Dispense in tubes containing Durham's tubes and sterilize by autoclaving at 115°C for 20 minutes.

Note: #- Corresponds to 10 lbs pressure

Principle And Interpretation

DEV Glucose Broth is used for detection of microbial decomposition of glucose. This medium is also suitable for the detection of *E.coli* for bacteriological control of drinking water (2).

HM peptone and HM extract provides nitrogenous nutrients to the organisms. Sodium chloride maintains the osmotic equilibrium of the medium. Bromo Cresol purple is the pH indicator which turns yellow at acidic pH. Gas formation is seen in Durham's tube.

Type of specimen

Water samples

Specimen Collection and Handling:

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(1)

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 organism may show poor growth due to nutritional variation.

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

Light yellow to light green homogeneous free flowing powder

Colour and Clarity of prepared medium

Light purple coloured clear solution

Reaction

Reaction of 2.8% w/v aqueous solution at 25°C. pH : 7.4±0.1

pH

7.30-7.50

Cultural Response

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

Organism	Inoculum (CFU)	Growth	Acid	Gas
<i>Alcaligenes faecalis</i> ATCC 8750	50-100	fair-good	negative reaction, no colour change	negative reaction
<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant	positive reaction, yellow colour	positive reaction
<i>Enterobacter aerogenes</i> ATCC 13048	50-100	good-luxuriant	positive reaction, yellow colour	positive reaction
<i>Klebsiella pneumoniae</i> ATCC 13883	50-100	good-luxuriant	positive reaction, yellow colour	positive reaction
<i>Salmonella Typhimurium</i> ATCC 14028	50-100	good-luxuriant	positive reaction, yellow colour	positive reaction

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. Use before expiry date on the label.

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. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
2. Fluka Chemie AG-Laboratory Chemical and Analytical Reagents 1999 – 2000/-(424).
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.

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Disclaimer :

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