



## Dextrose Broth

M044

Dextrose Broth is used for cultivation of wide variety of microorganisms.

### Composition\*\*

Ingredients	Gms / Litre
Tryptose	10.000
Beef extract	3.000
Dextrose	5.000
Sodium chloride	5.000
Final pH ( at 25°C)	7.2±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 23 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and dispense as desired.

### 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<sub>2</sub> formed (1). 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 (2). Sensitivity testing of neomycin and chlortetracycline is better done using this medium.

Beef extract 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.

### 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

M044: Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 24 hours.

Organism	Inoculum (CFU)	Growth	Gas	Growth (with 0.1% Agar)
<b>Cultural Response</b>				
<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant	positive reaction	good-luxuriant
<i>Neisseria gonorrhoeae</i> ATCC 19424	50-100	good-luxuriant	negative reaction	good-luxuriant
<i>Neisseria meningitidis</i> ATCC 13090	50-100	good-luxuriant	negative reaction	good-luxuriant
<i>Staphylococcus aureus</i> ATCC 25923	50-100	good-luxuriant	negative reaction	good-luxuriant

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<i>Streptococcus pyogenes</i> ATCC 19615	50-100	good-luxuriant	negative reaction	good-luxuriant
<i>Streptococcus pneumoniae</i> ATCC 6305	50-100	good-luxuriant	negative reaction	good-luxuriant

### Storage and Shelf Life

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

### Reference

1. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of
  2. Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore
- Walsbren and Dunnette A., 1951, Am. J. Clin. Path., 21:884.

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