



DEV Lactose Peptone Broth

M1356

Intended Use:

Recommended for enrichment and titre determination of coliform bacteria.

Composition**

Ingredients	g / L
HM peptone#	10.000
Lactose	10.000
Sodium chloride	5.000
Bromo cresol purple	0.010
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

- Equivalent to Meat peptone

Directions

Suspend 25.01 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C.

Principle And Interpretation

DEV Lactose Peptone Broth is used for enrichment and titre determination of coliform bacteria.

HM peptone provides carbon and other essential nutrients for growth. Sodium chloride is for the osmotic balance Lactose is the carbohydrate source. Bromocresol purple is a pH indicator which has a yellow colour below pH 5.3 and purple colour above pH 6.7. Due to the fermentation of lactose and the subsequent acid production the colour changes to yellow (1).

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.(2)
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. Further biochemical and serological tests must be carried out for further identification.

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

Purple coloured clear solution

Reaction

Reaction of 2.5 % 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 37°C for 18-24 hours.

Organism	Growth
# <i>Klebsiella aerogenes</i> ATCC 13048 (00175*)	good
<i>Escherichia coli</i> ATCC 25922 (00013*)	good
<i>Klebsiella pneumoniae</i> ATCC 13883 (00097*)	good

Key : (*) Corresponding WDCM numbers.

(#) Formerly known as *Enterobacter aerogenes*

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. MacFaddin J.F., 1985, Media for Isolation - Cultivation - Identification - Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
2. Lipps WC, Braun-Howland EB, Baxter TE, eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023
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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