

TECHNICAL DATA SHEET

Article No. 9487

Lactose Broth, ready-to-use culture medium

SPECIFICATION

Prepared Medium. Medium for pre-enrichment and detection of enterobacteria and coliforms in milk and water according to ISO standards.

Colour: Yellow
pH: 6.9 ± 0.2 at 25 °C

COMPOSITION IN G/ L

Gelatin Peptone	5.00
Meat extract	3.00
Lactose	5.00

PACKAGE DETAILS

9487-10x90 ml

Volume 90 ± 3 ml
Bottle size 125 ml
Packaging unit 10 bottles

1 box with 10 x 90 ml in 125 ml bottles. Injactable cap: Plastic screw inner cap. The use of syringes needles with a diameter greater than 0.8 mm is not recommended.

9487-10x100 ml

Volume 100 ± 3 ml
Bottle size 125 ml
Packaging unit 10 bottles

1 box with 10 x 100 ml in 125 ml bottles. Injactable cap: Plastic screw inner cap. The use of syringes needles with a diameter greater than 0.8 mm is not recommended.



DESCRIPTION/TECHNIQUE

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Lactose Broth is a classical medium for use in the presumptive testing for coliforms and for the enrichment of *Salmonella*. This formulation is per the standards recommended by APHA, AWWA, USP-NF and ISO. Since 2012, the ISO has adopted more selective and / or differential media such as LST, BLBVB and Colilert, replacing Lactose Broth.

It is commonly used with Durham fermentation tubes for the detection of gas formation. If a specific volume of sample is to be inoculated this must be taken into consideration when making up the medium as the concentration must not be altered on addition of the inoculum.

Although it is not Eijkman's original formulation, this broth provides excellent results in assays of gas production at $44,5^{\circ}\text{C} \pm 0,5$, which is a characteristic of *Escherichia coli*.

While preparing this medium it is important to avoid overheating and to distribute it into tubes before sterilization.

Technique

Collect, dilute and prepare samples and volumes as required according to specifications, directives, official standard regulations and/or expected results.

Dispense liquid medium in appropriate containers if the original container is of large volume.

Add to each tube a Durham tube glass before incubation to study super fermentation when used as a medium for coliform detection.

Inoculate aseptically the tubes with the prepared sample or its dilution.

Incubate the tubes tightly closed aerobically at $37 \pm 1^{\circ}\text{C}$ for 24 hours when used as pre-enrichment broth.

Read the turbidity increase as growth indicator.

(Incubation times, temperature and sample volumes may vary depending on the sample or on the specifications).

Each laboratory must evaluate the results according to their specifications.

MICROBIOLOGICAL CONTROL

Prepare tubes - Inoculate: Practical range 100 ± 20 CFU. min. 50 CFU (productivity).

Add an inverted Durham bell into each tube

Aerobiosis. Incubation at $37 \pm 1^{\circ}\text{C}$, reading after 24 ± 3 h

Microbiological control according to ISO 11133:2014/A1:2018.

Microorganism	Growth
<i>Escherichia coli</i> ATCC® 25922, WDCM 00013	Good - Gas Positive
<i>Salmonella typhimurium</i> ATCC® 14028, WDCM 00031	Good . Gas Negative
<i>Escherichia coli</i> ATCC® 8739, WDCM 00012	Good - Gas Positive
<i>Citrobacter freundii</i> ATCC® 43864, WDCM 00006	Good - Gas Positive
<i>Enterococcus faecalis</i> ATCC® 29212, WDCM 00087 (30°C)	Good . Gas Negative
<i>Ps. aeruginosa</i> ATCC® 27853, WDCM 00025	Good . Gas Negative

Sterility control:

Incubation 48 hours at 30-35 °C and 48 hours at 20-25 °C: NO GROWTH.

Check at 7 days after incubation in same conditions.

REFERENCES

- APHA-AWWA-WPCF (1998) Standard methods for the examination of water and wastewater. 20th ed. APHA Washington.
- DOWNES, F.P. & K. ITO (2001) Compendium of Methods for the Microbiological Examination of Foods. 4th ed. APHA. Washington.
- FDA (Food and Drug Administrations) (1998) Bacteriological Analytical Manual 8th ed. Rev A. AOAC International. Gaithersburg. VA. USA.
- ISO 9308-2 Standard. (1990) Water Quality - Detection and enumeration of coliform organisms, thermotolerant coliform and presumptive E. coli - MPN technique.
- ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- ISO 21150:2015 Standard. Cosmetics - Detection of Escherichia coli.
- US PHARMACOPOEIA (2005) <61> Microbial limit test. US Pharmacopeial Conv. Inc. Rockville. MD. USA.
- VANDERZANT & SPLITTSTOESSER (1992) Compendium of Methods for the Microbiological Examination of Foods. 3rd ed. APHA. Washington.

STORAGE

8 - 25 °C

SHELF LIFE

16 months unopened from date of manufacture

updated: 29.08.2022

