

TM 2152 – LACTOSE MONOHYDRATE BROTH (BROTH MEDIUM D)

INTENDED USE

For the detection of coliform bacteria in water, foods, dairy products.

PRODUCT SUMMARY AND EXPLANATION

Lactose Broth is recommended by European pharmacopoeia for selective pre-enrichment of *Enterobacteriaceae* as well as for *E. coli* and *Salmonella* in water, food and pharmaceutical products. The medium is used for detection of specified microorganisms of non-sterile products according to European Pharmacopoeia (EP). This medium is also recommended by various other pharmacopoeia. Lactose Broth is also recommended by APHA in the performance and confirmation of the presumptive test for coliform bacteria in water, food, milk. This medium can be used as an alternate to Lauryl Sulphate Broth in the presumptive test of the MPN of standard coliforms.

COMPOSITION

Ingredients	Gms / Ltr
Pancreatic digest of gelatin	5.000
Beef extract	3.000
Lactose monohydrate	5.000

PRINCIPLE

This medium consists of Pancreatic digest of gelatin and beef extract which supply essential nutrients to the organisms. Lactose monohydrate is a fermentable carbohydrate for the coliforms. Tubes of Lactose Broth are inoculated with dilutions of water or milk, etc. under test, and incubated at 35°C and examined for gas formation after 24 and 48 hours.

INSTRUCTION FOR USE

- Dissolve 12.75 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely. For larger inocula (10 ml or more), concentrated medium may be prepared to account for medium dilution by the inoculum.
- Dispense in tubes containing inverted fermentation vial (Durham's tube) as desired.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes and cool immediately.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light amber coloured clear solution.
pH (at 25°C)	: 6.9 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Gas	Incubation Temperature	Incubation Period
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<i>Klebsiella aerogenes</i>	13048	50-100	Luxuriant	Positive reaction	35-37°C	18-48 Hours
<i>Enterococcus faecalis</i>	29212	50-100	Luxuriant	Negative reaction	35-37°C	18-48 Hours
<i>Escherichia coli</i>	8739	50-100	Luxuriant	Positive reaction	35-37°C	18-48 Hours
<i>Pseudomonas aeruginosa</i>	9027	50-100	Luxuriant	Negative reaction	35-37°C	18-48 Hours
<i>Salmonella Typhimurium</i>	14028	50-100	Luxuriant	Negative reaction	35-37°C	18-48 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.










Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Eaton A. D., Clesceri L. S. and Greenberg A W.,(Eds.), 2008, Standard Methods for the Examination of Water and Wastewater, 21st ed., APHA, Washington, D.C.
2. Downes F P and Ito K(Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C
3. Wehr H M and Frank J H., 2004, Standard Methods for the Examination of Dairy Products, 17th ed., APHA Inc., Washington, D.C.
4. European Pharmacopoeia, 2008, European Department, for the quality of Medicines.
5. The United States Pharmacopoeia, 2008, The United States Pharmacopoeial Convention. Rockville, MD.
6. British Pharmacopoeia, 2009, The Stationery office British Pharmacopoeia
7. The Indian Pharmacopoeia 2007, Govt. of India, 2007. The Controller of Publication, Delhi.

 Good Manufacturing Practices Certified	 Best Before	 Quantity	 Catalogue Number	 Manufacturer
 Temperature Unit	 Lot / Batch Number	 Consults Instructions for Use	 QR Code	

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.



***For Lab Use Only**
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