

## Lactose Monohydrate Broth (Broth Medium D) EP

### Intended Use

Lactose Monohydrate Broth (Broth Medium D) is used for the detection of coliforms in water, food and dairy products in compliance with EP.

### Summary

Lactose Monohydrate 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 nonsterile products according to European Pharmacopoeia (EP). This medium is also recommended by various other Pharmacopoeia. Lactose Monohydrate 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.

### Principle

Pancreatic digest of gelatin and beef extract supply essential nutrients to the organisms. Lactose monohydrate is a fermentable carbohydrate for the coliforms.

### Formula\*

Ingredients	g/L
Pancreatic Digest of Gelatin	5.0
Beef Extract	3.0
Lactose Monohydrate	5.0
Final pH (at 25°C)	6.9 ± 0.2

\*Adjusted to suit performance parameters

### Storage and Stability

Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

### Type of specimen

Food and Dairy samples; Water samples

### Specimen Collection and Handling

Ensure that all samples are properly labelled.

Follow appropriate techniques for handling samples as per established guidelines.

Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.

The samples must be stored and tested within the permissible time duration.

After use, contaminated materials must be sterilized by autoclaving before discarding.

### Directions

1. Suspend 12.75 g of the powder in 1000 mL purified / distilled water.
2. Heat if necessary, to dissolve the powder completely.
3. For larger inocula (10 mL or more), concentrated medium may be prepared to account for medium dilution by the inoculum.
4. Dispense in tubes containing inverted fermentation vial (Durham's tube) as desired.
5. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle and cool immediately.

## Quality Control

**Dehydrated Appearance:** Yellow coloured, homogenous, free flowing powder.

**Prepared Appearance:** Light yellow to medium amber coloured, clear solution without any precipitate.

**Growth Promotion Test:** Growth promotion is carried out in accordance with the harmonized method of EP and growth is observed after an incubation at 30-35°C for 18- 48 hours.

**Growth Promoting Properties:** The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating  $\leq 100$  cfu of appropriate microorganism at 30-35°C for 18 hours.

Organisms (ATCC)	Growth	Gas	Acid
<i>Klebsiella aerogenes</i> (13048)	Good	+	+
<i>Enterococcus faecalis</i> (29212)	Good	-	-
<i>Escherichia coli</i> (8739)	Good	+	+
<i>Escherichia coli</i> (25922)	Good	+	+
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> (14028)	Good	-	-

### Note:

After incubation, add 1-2 drops of 1% phenol red solution to observe acid production.

## Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

## Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

## Reference

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. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

## Product Presentation:

Cat No.	Product description	Pack Size
201120060100	Dehydrated Culture Media	100 g
201120060500	Dehydrated Culture Media	500 g

## Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.

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