BacterLab Division

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BAGGED MEDIUM

BacterBag™ Lactose Broth

The medium used for the detection of *Enterobacteriaceae* particularly *coliform* and *Salmonella* species from water, food and dairy products as per Standard Methods and FDA BAM.

Code:10003

1. PURPOSE OF USE

BacterBag™ Lactose Broth is used for the cultivation of *Salmonella* and *coliform* bacteria from food, milk, and water in the laboratory. It is also suitable for the cultivation of all Gram-negative bacteria.

2. PRINCIPLE

BacterBag™ Lactose Broth used for the primary enrichment step, does not contain inhibitors or indicators, and allows the growth of intestinal bacteria.

Lactose Broth is recommended by APHA in the performance and confirmation of the presumptive test for coliform bacteria in water, food and milk. This medium was initially listed as an alternative to Lauryl Sulfate Broth in the presumptive Standard Total *Coliform* Multiple-Tube (MPN) Test for water analysis. Although it is not the original formulation, Lactose Broth provides excellent results in Eijkman Assays of gas production at 45°C, 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. This medium is recommended by FDA BAM for presumptive identification of *coliforms*, *E.coli* and *faecal coliforms* using MPN Technique.

Basic Composition

For 1L of medium (reference):

Pancreatic digest of gelatin	5,0 g
Meat extract	3,0 g
Lactose	5,0 g

pH of the complete medium at 25°C: 6,9 ± 0,2

3. MEDIUM PREPARATION

- The medium bags are pre-prepared and require no further formulation.

4. INSTRUCTIONS FOR USE

- Dispense the **BacterBag™ Lactose Broth** media into tubes.
- Before use keep the tubes of **BacterBag™ Lactose Broth** at room temperature or at 35 – 37°C.
- Open the tubes immediately before inoculating and discard all the opened tubes which have not been used.
- Introduce 1 g or 1 mL of the specimen into the tube.
- Mix as necessary to obtain a homogeneous suspension.
- Turn once the tube to let air go out from the Durham tube.
- Incubate at 35 – 37°C for 24 hours.

5. RESULT INTERPRETATION

- Turbidity in the broth is the sign of bacterial growth. Production of gas is evident in the Durham tube.
- This medium is used for the recovery and enrichment of bacteria present in the sample. Thus, secondary culturing in other selective media is necessary for bacterial identification.

6. QUALITY CONTROL

BacterLab ensures the quality of each product batch by testing it with standard ATCC strains.

Reference strains	Incubation conditions	Expected results
Escherichia coli ATCC 25922 (WDCM 00013)	18 – 48 hours at 35 – 37ºC	Good growth; Gas: positive reaction
Enterococcus faecalis ATCC 29212 (WDCM 00087)		Good growth; Gas: positive reaction
Pseudomonas paraeruginosa ATCC 9027 (WDCM 00026)		Good growth; Gas: negative reaction
Pseudomonas aeruginosa ATCC 27853 (WDCM 00025)		Good growth; Gas: negative reaction

7. STORAGE AND TRANSPORT CONDITIONS

- Storage**:** 4 – 25°C.
- Transport: Ambient temperature.

8. PACKAGING

- Packaging: 5 liter/ bag or as per customer requirements.

9. SHELF LIFE

- Shelf life: 12 months from the date of manufacture.

10. REFERENCES

- Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
- Peter Feng, Stephen D. Weagant, Michael A. Grant, William Burkhard, FDA BAM Chapter 4: Enumeration of Escherichia coli and the Coliform Bacteria.
- 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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- Food and Drug Administration. 2000. *Bacteriological Analytical Manual Online*. AOAC International, Gaithersburg, MD. http://www.fda.gov/Food/ScienceResearchLaboratoryMethods/BacteriologicalAnalyticalManualBAM/ucm055778.htm

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