ARENA
BioScien

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Lactose Broth

A broth medium that is recommended for lactose fermentation studies and detection of coliform bacteria.

REF: BS.1/LC01.100.0100	100 Grams	REF: BS.1/LC01.250.0250	250 Grams
REF: BS.1/LC01.500.0500	500 Grams		

CLINICAL SIGNIFICANCE

Lactose Broth is frequently used as a pre-enrichment medium when testing foods, water and dairy products for *Salmonella* spp. In dried or processed foods, *Salmonella* species may be sub-lethally injured and in low numbers. The presence of other bacteria as well as components of the food sample may delay the growth and recovery of Salmonella. Pre-enrichment in a non-selective medium such as Lactose Broth allows for repair of cell damage, dilutes toxic or inhibitory substances, and provides a nutritional advantage to Salmonella over other bacteria. Lactose Broth is recommended by the American Public Health Association (APHA), for the presumptive test of coliform bacteria in water, food and milk. Lactose Broth is not intended for use in the diagnosis of disease or other conditions in humans.

METHOD PRINCIPLE

Peptone and beef extract supply essential nitrogenous nutrients for bacterial growth. Lactose is a fermentable carbohydrate and a source of energy. Fermentation of lactose is detected by gas production in the Durham tube.

MEDIA COMPOSITION

Item	Formula per liter of medium
Peptone	5 gm
Beef Extract	3 gm
Lactose	5 gm

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.
  S56: dispose of this material and its container at hazardous or special waste collection point.
  S57: use appropriate container to avoid environmental contamination.
  S61: avoid release in environment.

For further information, refer to the Lactose Broth material safety data sheet.

STORAGE AND STABILITY

BioScien Lactose Broth should be stored between 10-30°C in a firmly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Final pH 6.9±0.2 at 25°C

PREPARATION

Suspend 13 grams in 1000 ml distilled water, mix well. Heat if necessary to ensure complete solution is prepared. Distribute in tubes containing inverted Durham's tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Deterioration

The color of ***BioScien*** Lactose Broth is cream to yellow colored homogeneous free flowing powder. Prepared Media is light amber in color without any precipitate. If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

SPECIMEN

Water samples, food samples and dairy products.

EQUIPMENT REQUIRED NOT PROVIDED

- Durham Tubes
- Sterile Test tubes
- Incubator
- Autoclave

PERFORMANCE CHARACTERISTICS

Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 24 hours.

Microorganisms	Growth	Gas
Enterococcus faecalis (ATCC 29212)	luxuriant	-
Enterobacter aerogenes (ATCC 13048)	luxuriant	+
Escherichia coli (ATCC 25922)	luxuriant	+
Pseudomonas aeruginosa (ATCC 27853)	luxuriant	-

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact ***BioScien*** technical support.

REFERENCES

1. Eaton A. D., Clesceri L. S., Rice E. W. and Greenberg A W.(Eds.), 2005, 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 Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
4. Marshall, R. T. (ed.). 2004. Standard methods for the microbiological examination of dairy products, 17th ed. American Public Health Association, Washington, D.C.

SYMBOLS IN PRODUCT LABELLING			
IVD	For in-vitro diagnostic use	Σ	Number of <n> test in the pack
LOT	Batch Code/Lot number		Caution
REF	Catalogue Number		Do not use if package is damaged
	Temperature Limitation		Consult Instruction for use
	Expiration Date		
	Manufactured by		