# LACTOSE BROTH M173

## PRODUCT TECHNICAL INFORMATION

**USE**: Lactose Broth is used for the detection and/or verification of the presence of *Salmonella* and coliform organisms in water, foods, and dairy products.

**DESCRIPTION**: Lactose Broth was formulated in accordance with recommendations of the American Public Health Association (APHA) and the American Water Works Association for testing dairy products and water for the presence of coliform organisms. This medium was, but no longer is, listed as an alternative to Lauryl Sulfate Broth in the presumptive portion of the Standard Total Coliform Multiple-Tube (MPN) Test for water analysis provided that it had been demonstrated not to increase the frequency of false-positives nor mask coliforms. It is one of the recommended media in the Compendium of Methods for the Microbiological Examination of Foods for pre-enrichment when Salmonella organisms are suspected in foods. It is included in the USP for use in the performance of Microbial Limit Tests for Salmonella species and Escherichia coli.

**FORMULA*** per Liter

| | |
|---|---|
| Beef Extract | …3.0g |
| Pancreatic Digest of Gelatin | 5.0g |
| Lactose | 5.0g |
| **Total** | **13.0g** |

*Adjusted and/or supplemented as required to meet performance criteria.

**Final pH**: 6.9 ± 0.2 at 25ºC

**PREPARATION**:

1. Dissolve 13 g of the medium in one liter of purified water.
2. Heat with frequent agitation to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes

**PRINCIPLES OF PROCEDURE:** Pancreatic Digest of Gelatin and Beef Extract provide the carbon and nitrogen sources for general growth requirements in Lactose Broth. Lactose is a carbohydrate source. Fermentation of lactose is demonstrated by the production of gas. If no gas has formed and been trapped in the inverted tube, reincubate and reexamine after 48 ± 3 hours.

**QUALITY CONTROL SPECIFICATIONS**:

1. The powder is homogeneous, free flowing and light beige.
2. Visually the prepared medium is light yellow and clear..
3. Expected result after 18-24hrs.at 35ºC

| Microorganism | CFU | Growth | Gas |
|---|---|---|---|
| *Enterococcus faecalis* ATCC™ 19433 | 10 – 300 | + | + |
| *Escherichia coli* ATCC™ 25922 | 10 – 300 | + | + |
| *Klebsiella pneumoniae* ATCC™ 13883 | 10 – 300 | - | - |
| *Pseudomonas aeruginosa* ATCC™ 27853 | 10 – 300 | + | - |
| *Salmonella typhimurium* ATCC™ 14028 | 10 – 300 | + | - |

**STORAGE**: Store sealed bottle containing the dehydrated medium at 2 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

**LIMITATIONS AND PRECAUTIONS:**
FOR LABORATORY USE ONLY

**SIZES AVAILABLE**: M1731 (13), M1732 (500g), M1733 (2Kg), M173-2.5 (2.5K), M1734 (10Kg)

## REFERENCES:

1. American Public Health Association. 1946. Standard methods for the examination of water and sewage, 9th ed. APHA, New York, N.Y.
2. American Public Health Association. 1948. Standard methods for the examination of dairy products, 9th ed. APHA, New York, N.Y.
3. Rand, Greenberg and Taras (ed.). 1976. Standard methods for the examination of water and wastewater, 14th ed. American Public Health Association, Washington, D.C.
4. Downes and Ito (ed.). 2001. Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.
5. United States Pharmacopeial Convention, Inc. 2001. The United States pharmacopeia 25/The national formulary 20 – 2002. United States Pharmacopeial Convention