
# LB Broth (Lennox)

*Recommended medium for the test of Escherichia coli in molecular genetics studies*

## Product Description

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| **Name :** | **LB Broth (Lennox)** | | | |
| **Catalog Number :** | T3752A, 500 g | | | |
| **Formula in g/l :** | Tryptone | 10.00 | Yeast Extract | 5.00 |
| | Sodium Chloride | 5.00 | | |
| | **Final pH 7.0 ± 0.2 at 25ºC** | | | |

**Storage** 2-25°C. Once opened keep powdered medium closed to avoid hydration.

## Directions for use

### Preparation

Suspend 20 grams of the medium in one liter of distilled water .Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into appropriate containers and sterilize in autoclave at 121°C for 15 minutes. The prepared medium should be stored at 2-8°C. The color of the prepared medium is clear amber.

The dehydrated medium should be homogeneous, free-flowing and beige in color. If there are any physical changes, discard the medium.

### Guidelines for use

LB BROTH (LENNOX) is nutritionally rich medium developed by Lennox for the growth and maintenance of pure culture of recombinant strains of E. coli.

It is a rich growth medium that contains all the nutritional requirements for E.coli strains. In the formula, Tryptone provides nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is source of vitamins, particularly the B-group. Sodium chloride supplies essential electrolytes for transport and osmotic balance.

LB Broth (Lennox) contains ten times the sodium chloride level of Luria Broth (Miller's Modification) (Cat. 96381A) and a half of the level found in Luria Broth (Miller's LB Broth) (Cat. N1398A). This allows selecting the optimal salt concentration medium for a specific strain.

Bacteria that contain plasmids tend to grow best in broth that has between 5 and 10 g of salt. For a faster growth, the medium can be supplemented with 0.1% glucose or 0.4% glycerol. Various cofactors may also need to be added to the

broth if working with certain types of bacteriophages. For example, bacteriophage labmda requires an excess of magnesium in the broth to properly infect bacteria.

The cultivation in LB Broth allows the cells with an insert plasmid, to begin to express the genes on the transformed plasmid, including the antibiotic resistance gene. If the transformed E.coli are plated directly onto selective agar media (LB Agar containing antibiotic), fewer transformed colonies will appear per ml plated. Growing the transformed cells in LB broth will increase the number of transformed cells per ml.

To select the bacteria with the plasmid, it is necessary to subcultivate an inoculum from LB Broth to a LB Agar plate with the antibiotic added.

## Microbiological test

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 35 ± 2°C and observed after 18 - 24 hours.

| **Microorganisms** | | **Growth** |
|---|---|---|
| *Escherichia coli* | ATCC 23724 | Good |
| *Escherichia coli* | ATCC 53868 | Good |
| *Escherichia coli* | ATCC 33694 | Good |
| *Escherichia coli* | ATCC 33849 | Good |

## References


- Atlas, R.M., L.C. Parks (1993) Handbook of Microbiological Media. CRC Press, Inc. London1
- Lennox. (1955). Virology 1:190.
- Sambrook, Fritsch and Maniatis. (1989). Molecular cloning: a laboratory manual, 2nd ed. Cold Spring Harbor Laboratory Press, ColdSpring Harbor, N.Y.


## Ordering information

Catalog size quantities and prices may be found at http://www.interchim.com.
Please inquire for higher quantities (availability, shipment conditions).
For any information, please ask : Uptima / Interchim; Hotline : +33(0)4 70 03 73 06
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