LB BROTH, LENNOX (7290)

Intended Use
LB Broth, Lennox is used in molecular genetic studies.

Product Summary and Explanation
LB Broth formula is based on L Broth described by Lennox for growth and maintenance of *E. coli* strains used in molecular microbiology procedures.[1] LB Broth is nutritionally rich, formulated for the isolation of pure recombinant strains. *E. coli* is grown to late log phase in LB Broth. Some plasmid vectors may replicate to high copy numbers without selective amplification. Some vectors may require selective amplification to reach high copy numbers. Chloramphenicol can be added to inhibit host synthesis and, as a result, prevent replication of the bacterial chromosome.[2]

LB Broth contains ten times the sodium chloride level of Luria Broth, Miller and one half of that found in LB Broth, Miller.[3] This permits the researcher to select the optimal salt concentration for a specific strain. If desired, the medium may be aseptically supplemented with glucose to prepare the complete medium described by Lennox.

Principles of the Procedure
The nitrogen, amino acids, and carbon sources are provided by Enzymatic Digest of Casein. Vitamins and certain trace elements are supplied by Yeast Extract. Sodium ions for transport and osmotic balance are provided by Sodium Chloride.

Formula / Liter
Enzymatic Digest of Casein ..... 10 g
Yeast Extract..... 5 g
Sodium Chloride ..... 5 g
Final pH: 7.3 ± 0.2 at 25°C
Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precautions
1. For Laboratory Use.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions
1. Dissolve 20 g of the medium in one liter of purified water.
2. Mix thoroughly.
3. Autoclave at 121°C for 15 minutes.

Quality Control Specifications
Dehydrated Appearance: Powder is homogeneous, free flowing, and light beige.

Prepared Appearance: Prepared medium is yellow to gold and clear to moderately hazy.

Expected Cultural Response: Cultural response on LB Broth, Lennox at 35 ± 2°C and examined for growth after 18 - 24 hours incubation.

Microorganism	Approx. Inoculum (CFU)	Expected Results
Bacillus subtilis ATCC® 9372	10 - 300	Good growth
Escherichia coli ATCC® 25922	10 - 300	Good growth

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure
Consult appropriate references for recommended test procedures.[1-3]

Results
Growth is evident in the form of turbidity.

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.

Expiration
Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitation of the Procedure
Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

Packaging

LB Broth, Lennox	**Code No.**	**7290A**	**500 g**
		7290B	**2 kg**
		7290C	**10 kg**

References

1. **Lennox, E. S.** 1955. Transduction of linked genetic characters of the host by bacteriophage P1. Virology. **1**:190.
2. **Sambrook, J., E. F. Fritsch, and T. Maniatis.** 1989. Molecular cloning: a laboratory manual, 2nd ed. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York.
3. **Miller, J. H.** 1972. Experiments in molecular genetics. Cold Spring Harbor Laboratory, Cold Spring Harbor, New York.

Technical Information
Contact Acumedia Manufacturers, Inc. for Technical Service or questions involving dehydrated culture media preparation or performance at (517)372-9200 fax us at (517)372-2006.