

# Product Data Sheet

## Name of Product:

### LB Broths (Luria, Lennox, Miller, Standard and APF Versions)

Catalog Number: 0101, 0102, 0103, 0131, 0132, 0133

## Product Description

LB Broth has been the venerable culture medium formulation used for the cultivation of *Escherichia coli* for over 50 years. First introduced in 1955 by Luria and Burrous (1) and Lennox (2), LB Broth evolved into three different variations, designated here as LB Miller (3), LB Lennox and LB Luria after the authors who respectively developed the formulations. The LB Broths are nutritionally rich yet simple media composed of three ingredients, yeast extract, sodium chloride and casein hydrolysate. Athena introduced the *Animal Product-Free* formulations in 2004.

**Table 1 Composition of LB Broths (g/L).**

Ingredient (Cat. No.)	Luria (0101)	Lennox (0102)	Miller (0103)	APF Luria (0131)	APF Lennox (0132)	APF Miller (0133)
Yeast Extract	5	5	5	5	5	5
NaCl	0.5	5	10	0.5	5	10
Casein Hydrolysate	10	10	10			
Atholate™ <sup>a</sup>				15	15	15
g/L	15.5	20	25	20.5	25	30

<sup>a</sup> Atholate™ is a proprietary blend of plant protein hydrolysates that is a direct replacement for casein hydrolysate.

## Instructions for Use:

1. Dissolve the amount of powder needed according to Table 1 in 1 liter of deionized water.
2. Adjust pH to the desired value.
3. Steam or filter sterilize. (Athena recommends filter sterilization.)
4. Add antibiotic from a sterile stock solution as needed.
5. Store liquid medium at 4°C. Shelf-life is 6 months at 4°C.

## Animal Product Free:

Animal source materials are primarily a concern with regard to the possible transmission of diseases. AthenaES® classifies manufactured goods as animal product free ("*APF Certified*") when such products do not contain any primary raw materials derived directly from bovine or other animal tissues or use animal-derived materials in the manufacturing process. *APF Certified* culture medium and medium components do not contain any animal-derived materials. Manufactured products other than culture medium may be derived from processes which include secondary and tertiary level materials of animal origin which are classified only as very low risk (Category IV as defined by the European Medicines Agency or Category C as defined by the World Health Organization). None of the raw materials used in the manufacture of any AthenaES® products classified as *APF Certified* are derived directly from animal tissues. Secondary or tertiary level raw material are sourced from either synthetic or Category IV/C or non-human disease carrying animal species. To the best of our knowledge, all of AthenaES® products comply with this policy.



**Athena Enzyme Systems™**  
1450 South Rolling Road  
Baltimore, MD 21227  
USA  
a division of Athena Environmental Sciences, Inc.

T (MD): 410-455-6319  
T (USA): 888-892-8408  
F: 410-455-1155  
aesinfo@athenaes.com

## Packaging:

Product	Packaging	Cat. No.
LB (Luria), powder	500 g	0101
LB (Lennox), powder	500 g	0102
LB (Miller), powder	500 g	0103
APF LB (Luria), powder	500 g	0131
APF LB (Lennox), powder	500 g	0132
APF LB (Miller), powder	500 g	0133

For larger quantities please inquire.

## Quality Control:

Test	Specification
DCM Appearance	Homogeneous, free flowing
Color	Light beige
PPM Appearance	Clear, no to light ppt.
Color	Amber
pH at 25°C	7.0 ± 0.2
Microbial Growth	Good to Excellent

## References:

1. Luria, S. E. and J. W. Burrous. 1955. Hybridization between *Escherichia coli* and *Shigella*. *J. Bacteriol.* 74:461-476.
2. Lennox, E. S. 1955. Transduction of linked genetic characters of the host by bacteriophage P1. *Virology.* 1:190-206.
3. Miller, 1972. *Experiments in Molecular Genetics.* Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.
4. Luria, S. E., J. N. Adams, and R. C. Ting. 1960. Transduction of lactose-utilizing ability among strains of *E. coli* and *S. dysenteriae* and the properties of the transducing phage particles. *Virology.* 12:348-390.

## Material Safety Data:

FOR RESEARCH USE ONLY. NOT INTENDED OR APPROVED FOR HUMAN, DIAGNOSTICS OR VETERINARY USE. Do not ingest, swallow or inhale. Do not get in eyes, on skin or on clothing. Wash thoroughly after handling. For complete safety information see the full Material Safety Date Sheet.