PRODUCT SPECIFICATION SHEET

Luria Broth (DM433)

Intended Use
Luria Broth (DM433) is recommended for cultivation and maintenance of recombinant strains of *Escherichia coli.*

Product Summary and Explanation
Luria Broth is a nutritionally rich media developed by Lennox[(1)] for the cultivation and maintenance of pure cultures of recombinant strains of *Escherichia coli*. Luria Broth is one of the many modifications, suggested by different authors, of the original formulation of Luria.[(2)] These strains are generally derived from *E. coli* K12, which are deficient in B vitamin production and are further modified by specific mutation to create auxotrophic strains that are unable to grow on nutritionally deficient media. This medium is generally used for molecular and genetic studies, because of its nutritive capacity and simple composition, which can be easily altered as per specific requirements. This medium provides all the nutritional requirements for the growth of pure cultures of recombinant strains.
Luria Broth, Lennox contains ten times the sodium chloride level of Luria Broth Base, Miller and one half of that found in LB Broth, Miller. This allows 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
Luria Broth contains casein enzymic hydrolysate which provides nitrogen and carbon. Yeast extract is a source of vitamins (including B vitamins) and certain trace elements. Sodium ions for membrane transport and osmotic balance are provided by sodium chloride.

Formula / Liter

Ingredients	Gms / Liter
Casein enzymic hydrolysate	10.00
Yeast extract	5.00
Sodium chloride	5.00
Final pH : 7.0 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

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

Directions
1. Suspend 20 grams of the medium in one liter of distilled water.
2. Heat if necessary to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle. Dispense as desired.

Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Yellow to amber coloured clear solution in tubes
Reaction of 2.0% Solution	pH : 7.0 ± 0.2 at 25°C

PRODUCT SPECIFICATION SHEET

Gel Strength	Not Applicable

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

Sr. No.	Organisms	Results to be achieved	
		Inoculum (CFU)	Growth
1.	*Escherichia coli ATCC 23724*	50 -100	good-luxuriant
2.	*Escherichia coli ATCC 25922*	50 -100	good-luxuriant
3.	*Escherichia coli DH5 alpha MTCC 1652*	50 -100	good-luxuriant

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

Test Procedure
Refer to appropriate references for standard test procedures.[3-5]

Results
After sufficient incubation, the broth medium, growth is evident by the appearance of turbidity. Refer to appropriate references and test procedures for interpretation of results.

Storage
Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

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

Limitations of the Procedure
1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging
Product Name : Luria Broth
Product Code : DM433
Available Pack sizes : 500gm

References

1. Lennox E. S., 1955, Transduction of Linked Genetic Characters of the host by bacteriophage P1., Virology, 1:190.
2. Luria S. E. and Burrous J. W., 1957, J. Bacteriol. 74: 461-476.
3. Miller, 1972, Experiments in Molecular Genetics, Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y.
4. Sambrook J., Fritsch E. F., and Maniatis T., 1989, Molecular Cloning: A Laboratory Manual, 2nd Ed., Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y.
5. Ausubel F. M., Brent R., Kingston R. E., Moore D. D., Seidman J. G., Smith J. A. and Steuhl K., (Eds.), 1994, Current Protocols in Molecular Biology, Vol. I, Greene Publishing Associates, Inc. Brooklyn, N.Y.

PRODUCT SPECIFICATION SHEET

Further Information

For further information please contact your local MICROMASTER Representative.

MICROMASTER LABORATORIES PRIVATE LIMITED
Unit 38/39, Kalpataru Industrial Estate,
Off G.B. Road, Near 'R-Mall' , Thane (W) – 400607. M.S. INDIA.
Ph: +91-22-25895505, 4760, 4681. Cell: 9320126789.
Email: micromaster@micromasterlab.com

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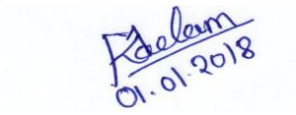
Prepared By	Checked By	Approved By
		
Microbiologist	**Head Quality Control**	**Head Quality Assurance**

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