



LURIA-BERTANI AGAR/BROTH

INTENDED USE

LB Agar, Miller and LB Broth, Miller (Luria-Bertani) are used for maintaining and propagating *Escherichia coli* in molecular microbiology procedures.

SUMMARY AND EXPLANATION

LB Agar, Miller and LB Broth, Miller are based on LB Medium as described by Miller for the growth and maintenance of *E. coli* strains used in molecular microbiology procedures.¹⁻³ These are nutritionally rich media designed for growth of pure cultures of recombinant strains. *E. coli* grows more rapidly because they provide the cells with amino acids, nucleotide precursors, vitamins and other metabolites that the microorganism would otherwise have to synthesize.⁴

LB Broth, Miller contains twenty times the sodium chloride level of Luria Broth Base, Miller and twice the level found in LB Broth, Lennox.^{3,5,6} This allows the researcher to select the optimal salt concentration for a specific strain in LB Agar, Miller.

PRINCIPLE

Peptone provides nitrogen and carbon. Vitamins (including B vitamins) and certain trace elements are provided by yeast extract. Sodium ions for transport and osmotic balance are provided by sodium chloride. Agar is the solidifying agent in LB Agar, Miller.

REAGENTS (FORMULA)

Tryptone	10.0	g
Yeast Extract	5.0	g
Sodium Chloride	10.0	g
Agar	15.0	g
Deionized Water	1000.0	ml

LB Broth consists of the same ingredients without the agar.

PROCEDURE

Consult appropriate references for recommended test procedures.³⁻⁵

EXPECTED RESULTS

Growth should be evident on the agar medium by the appearance of colonies and/or a confluent lawn on the surface of the medium. In the broth medium, growth is evident by the appearance of turbidity.

QUALITY CONTROL

All lot numbers have been tested and have been found to be acceptable. Customers can test products using the following quality control organisms. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, sample results should not be reported.

Organisms	Incubation	Results
<i>Escherichia coli</i> ATCC 33526	35 ± 2°C for 18-24 hours	Growth

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BIBLIOGRAPHY

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5. Sambrook, Fritsch and Maniatis. 1989. Molecular cloning: a laboratory manual, 2nd. ed. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y.
6. Lennox. 1955. Virology 1:190.

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