

TM 377 – LURIA BROTH

INTENDED USE

For the cultivation and maintenance of recombinant strains of *Escherichia coli*.

PRODUCT SUMMARY AND EXPLANATION

Luria Broth is one of the many modifications, suggested by different authors, of the original formulation of Luria. 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. Luria Broth is the modification of the original formulation of Luria, as described by Lennox. Luria Broth contains half the concentration of sodium chloride than in Luria Broth, Miller. Therefore as per choice, the sodium chloride concentration can be altered. Luria Broth is used for the cultivation and maintenance of recombinant strains of *E. coli*, originally derived from *E. coli* strain K12, deficient in B vitamin production. These stains are specifically mutated to create an auxotrophic strain, unable to grow on a nutritionally deficient medium.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	10.000
Yeast extract	5.000
Sodium chloride	5.000

PRINCIPLE

Luria Broth is a nutritionally rich medium due to the presence of tryptone and yeast extract. This allows the recombinant strains of *E. coli* to grow more rapidly since all the nutrients and essential growth nutrients required by these strains are readily available to them and they don't need to synthesize it themselves including B-vitamin. Sodium chloride maintains the osmotic equilibrium. Refer appropriate references for standard procedures.

INSTRUCTION FOR USE

- Dissolve 20.0 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense in tubes or flasks as desired.
- Sterilize by autoclaving at 15 PSI pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder
Appearance of prepared medium	: Yellow to amber coloured clear solution in tubes
pH (at 25°C)	: 7.0±0.2

INTERPRETATION

Cultural response observed after an incubation.

Microorganism	Strain	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period

<i>Escherichia coli</i>	23724 ATCC	50-100	Luxuriant	35-37°C	18-24 Hours
<i>Escherichia coli</i>	25922 ATCC	50-100	Luxuriant	35-37°C	18-24 Hours
<i>Escherichia coli</i> <i>DH5 alpha</i>	1652 MTCC	50-100	Luxuriant	35-37°C	18-24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.













Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Luria S. E. and Burrous J. W., 1957, J. Bacteriol. 74: 461-476
2. 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.
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.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Barkstrasse 10 48163 Muenster, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

*For Lab Use Only
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