

TM 2171 – LURIA BROTH BASE, MILLER'S MODIFICATION

INTENDED USE

For the cultivation and maintenance of recombinant strains of *Escherichia coli* with or without addition of glucose.

PRODUCT SUMMARY AND EXPLANATION

This medium is based on original Luria broth formula described by Miller for the growth and maintenance of *E. coli* strains used in molecular microbiology. Luria broth Base, Miller is a nutritionally rich medium recommended for growth of pure cultures of recombinant strains. *E. coli* is grown in late log phase in LB medium. Some plasmid vectors may replicate to high copy numbers without selective amplification. Some vectors do not replicate so freely, and need to be selectively amplified. Chloramphenicol can be added to inhibit host synthesis and as a result prevent replication of the bacterial chromosome. Luria Broth Base, Miller's modification contains one tenth and one twentieth the sodium chloride level of the Lennox and Miller formulations of LB Agar respectively. This helps the user to select the optimal salt concentration for a specific strain. The medium may be aseptically supplemented with glucose, if desired.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	10.000
Yeast extract	5.000
Sodium chloride	0.500

PRINCIPLE

This medium consists of Casein enzymic hydrolysate which provides peptides and peptones while Vitamin B complex is provided by yeast extract. Sodium chloride provides sodium ions for membrane transport and also maintains the osmotic equilibrium of the medium.

INSTRUCTION FOR USE

- Dissolve 15.5 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C. If desired add 10 ml of 20% glucose solution.
- Mix thoroughly and pour into sterile test tubes or flasks.

QUALITY CONTROL SPECIFICATIONS

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

INTERPRETATION

Cultural characteristics observed after incubation.

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



<i>Escherichia coli</i>	25922 ATCC	50-100	Luxuriant	35-37°C	18-24 Hours
<i>Escherichia coli</i>	23724 ATCC	50-100	Luxuriant	35-37°C	18-24 Hours
<i>Escherichia coli</i> DH5 alpha	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. Miller ,J.H. 1772.Experiments in molecular genetics. Cold spring Harbor Laboratory, Cold spring Harbor, New York.
2. Sambrook, J., E.F. Fritsch and T. Maniatis. 1989.Molecular cloning: A laboratory manual, 2nd ed., Cold Spring Harbor Laboartory, Cold Spring Harbor, New York.
3. Lennox E.S. 1955, Transduction of Linked Genetic Characters of the host by bacteriophage P1., Virology, 1:190.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Cataloge Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Borkstrasse 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**
Revision: 08 Nov., 2019