TM 2169 – LURIA AGAR BASE, MILLERS 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 formula described by Miller for the growth and maintenance of *E. coli* strains used in molecular microbiology. Luria Agar 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 Agar 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
Agar	15.000

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. Agar acts as a solidifying agent.

INSTRUCTION FOR USE

- Dissolve 30.5 grams in 1000 ml purified/distilled water.
- Heat to boiling 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 well and pour into sterile Petri plates.

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 gel forms in Petri plates.

pH (at 25°C) : 7.0 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation with added 1 ml of 20% dextrose solution to 100 ml of TM 2169.

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

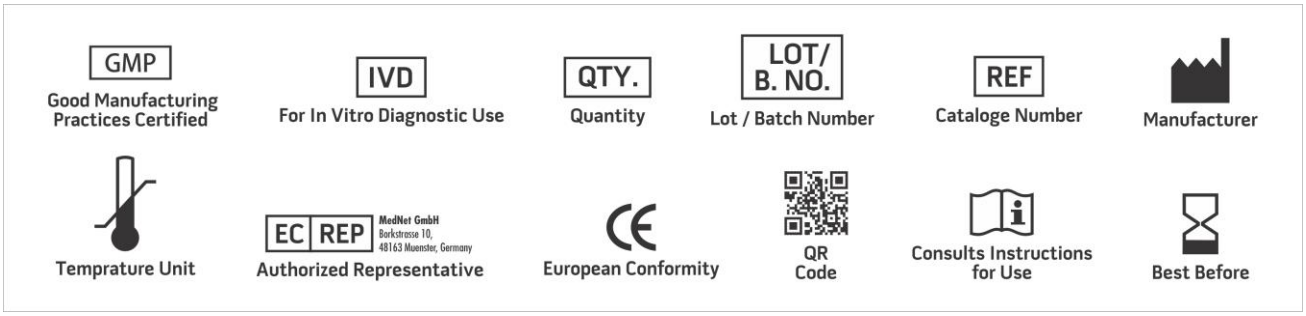
Escherichia coli	25922 ATCC	50-100	Luxuriant	>=70%	35-37°C	18-24 Hours
Escherichia coli	23724 ATCC	50-100	Luxuriant	>=70%	35-37°C	18-24 Hours
Escherichia coli DH5 alpha	1652 MTCC	50-100	Luxuriant	>=70%	35-37°C	18-24 Hours

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.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019