Technical Data

Luria Bertani Agar Plate w/100µg/ml Kanamycin & IPTG MP1151KI

Intended Use:

Recommended for the cultivation and maintenance of recombinant strains of *E.coli* for genetic and molecular biology studies

Composition**

Ingredients	Gms / Litre
Tryptone	10.000
Yeast extract	5.000
Sodium chloride	10.000
Agar	15.000
Kanamycin	0.100
IPTG	0.100
Final pH (at 25°C)	7.5±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

Principle And Interpretation

Luria Bertani Agar is prepared as described by Lennox (4) for cultivation and maintenance of recombinant strains of *Escherichia coli*. Luria Bertani Agar, Miller (1) is slightly different with double amount of sodium chloride. The media is nutritionally rich for the growth of pure cultures of recombinant strains. Strains derived from *Escherichia coli* K12 are deficient in Vitamin B synthesis are further modified by specific mutation to create auxotrophic strains and are therefore unable to grow on nutritionally deficient media. Tryptone 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.

Type of specimen

Recombinant strains of *E.coli*

Specimen Collection and Handling

For Recombinant strain samples follow appropriate techniques for handling specimens as per established guidelines (1,4). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3. Further biochemical and serological tests must be carried out for complete identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Sterile Luria Bertani Agar Plate w/100µg/ml Kanamycin & IPTG in 90mm disposable plates.

Colour of medium
Yellow to amber coloured medium

Quantity of medium
25ml of medium in disposable plate

Reaction

7.30-7.70

Sterility test
Passes release criteria

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

Organism	Growth
Escherichia coli DH5 alpha (MTCC 1652)	Inhibited
Escherichia coli BL21 (MTCC 1679)	Inhibited
Escherichia coli DH5 alpha (MTCC 1652) Transformed strain	luxuriant
Escherichia coli BL21 (MTCC 1679)Transformed strain	luxuriant

Key : (*) Corresponding WDCM numbers

Storage and Shelf Life

On receipt store between 2-8°C Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

Reference

1. Atlas R.M., 1993, Handbook of Microbiological Media, Ed. by Parks L., CRC Press, Inc.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. Lennox E.S., 1955, Transduction of Linked Genetic Characters of the host by bacteriophage P1., Virology, 1:190.

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