LB AGAR (MILLER)

AGLU-00P-500

- **Principle**

Luria Agar (Miller's LB Agar) is based on LB Medium as described by Miller for the growth and maintenance of *E. coli* strains used in molecular microbiology procedures. These strains are generally derived from *E. coli* K12, which are unable to produce vitamin B, so this media is formulated to enhance the growth of nutritionally demanding microorganisms. This strain of *E. coli* has been further modified through specific mutation to create an auxotrophic strain that is not capable of growth on nutritionally deficient media.

Tryptone provides nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is source of vitamins, particularly the B-group. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Bacteriological agar is the solidifying agent.

If desired aseptically add 10 ml of sterile 20% glucose solution and mix thoroughly for a better growth. Bacteria that contain plasmids tend to grow best in broth that has between 5 and 10 g of salt. Various cofactors may also need to be added to the broth if working with certain types of bacteriophages. For example, bacteriophage lambda requires an excess of magnesium in the broth to properly infect bacteria. Luria Agar (Miller LB Agar) has a different sodium chloride level than other media such as LB Agar (Lennox) (AGLB-00P-500). This allows to select the optimum salt concentration of the medium for a specific strain.

- **Regulatory compliance**

This product is manufactured under a quality management system in accordance with ISO 9001 and ISO 13485, and its formulation and quality control comply with applicable international standards, such as ISO 11133, where relevant.

- **Composition**

Ingredients	**g/L**
Bacteriological agar	15.00
Tryptone	10.00
Sodium chloride	10.00
Yeast extract	5.00

- **Preparation**

Suspend 40 grams of medium in one litre of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121 °C for 15 minutes. Cool to 45-5 °C, mix well and dispense into plates.

- **Applications and use**

- Carry out the experimental procedure according to appropriate use or purpose.

- Inoculate and incubate at a temperature of 35±2 °C for 18-24 hours.

- **Quality control**

Solubility	w/o rests
Appearance	Fine powder
Colour of the dehydrated medium	Beige
Colour of the prepared medium	Amber, slightly opalescent
Final pH (25 °C)	7.0 ± 0.2

- **Microbiological test**

Incubation conditions: 35±2 °C / 18-24 h.

Microorganism	ATCC	Specification
Escherichia coli	23724	Good growth >70%
Escherichia coli	33694	Good growth >70%
Escherichia coli	33849	Good growth >70%
Escherichia coli	39403	Good growth >70%
Escherichia coli	47014	Good growth >70%

- **Storage**

The product is highly hygroscopic; keep the container always closed and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Temp. Min.:2 °C Temp. Max.:25 °C.

Note: Sterilize media immediately after reconstitution.

- **Bibliography**

Atlas, R.M., L.C. Parks (1993) Handbook of Microbiological Media. CRC Press, Inc. London.

The condensed protocols from molecular cloning: a laboratory manual/ Joseph Sambrook, David W. Russell.

- **Product use limitation**

This product is developed, designed and supplied exclusively for research use only. It is not intended for diagnostic applications or drug development, and it is not suitable for administration to humans or animals.