

## Luria Agar with Ampicillin 50 µg/ml (Miller's LB Agar)

Cat. 2086

For E.coli in molecular genetics studies.

### Practical information

Applications	Categories
Selection of transformants	Escherichia coli

Industry: Molecular biology

### Principles and uses

Luria Agar with Ampicillin 50 µg/ml (Miller's LB Agar) is used for the selective growth of ampicillin resistant E. coli recombinant strains in molecular genetic studies.

The transformed E. coli are plated directly onto selective agar media (LB Agar containing antibiotic), fewer transformed colonies will appear per ml plated. To select the bacteria with the plasmid, it is necessary to subcultivate an inoculum from LB Agar to a LB Broth with the antibiotic added.

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

### Formula in g/L

Ampicillin	0,05	Bacteriological agar	15
Sodium chloride	10	Tryptone	10
Yeast extract	5		

### Preparation

Suspend 40 grams of medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Do not overheat. Do not sterilize in autoclave. Cool to 45-50 °C, mix well and dispense into plates.

### Instructions for use

Inoculate the medium by the streak plate method:

- In a Petri dish, add 12-15 ml of molten agar and let it solidify.
- Inoculate 0,1 ml of the initial suspension and/or diluted sample.
- Extend the inoculum with a sterile loop on the agar surface.
- Incubate the plates in an inverted position at a temperature of 35±2 °C for 18-24 hours.

### Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Fine powder	Beige	Ambre, slightly opalescent	7,0±0,2

### Microbiological test

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

Microrganisms	Specification
Escherichia coli DH5 alpha + pUC19	Good growth
Escherichia coli ATCC 25922	Total inhibition
Escherichia coli ATCC 8739	Total inhibition

## Storage

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Temp. Min.:2 °C  
Temp. Max.:25 °C

## Bibliography

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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.

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