TM 1475 – L B BROTH (Lennox)

INTENDED USE
For propagation and maintenance of *E. coli*.

PRODUCT SUMMARY AND EXPLANATION
LB Broth (Lennox) is a nutritionally rich medium developed by Lennox for the growth and maintenance of pure cultures of recombinant strains of *E. coli* used in molecular and microbiological 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.
Cultivation in LB Broth allows cells with an insert plasmid to start expressing the genes on the transformed plasmid, including the antibiotic resistance gene. If transformed *E. coli* are plated directly onto selective agar media (LB Agar containing antibiotic), fewer transformed colonies will appear per ml plated. Growing the transformed cells in LB broth will increase the number of transformed cells per ml. LB Broth (Lennox) contains ten times the sodium chloride level of Luria Broth (Miller's Modification) and a half of the level found in Luria Broth (Miller's LB Broth). This allows selecting the optimal salt concentration medium for a specific strain.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	10.000
Yeast extract	5.000
Sodium chloride	5.000

PRINCIPLE
This medium consists of Tryptone which 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. If desired, antibiotics can also be added.

INSTRUCTION FOR USE
- Dissolve 20.0 grams in 1000 ml purified/distilled water.
- Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution.
- Dispense into appropriate tubes and Sterilize in autoclave at 15 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS
Appearance of Powder : Beige coloured, homogeneous, free flowing powder.
Appearance of prepared medium : Amber coloured, clear solution in tubes.
pH (at 25°C) : 7.0 ± 0.2

INTERPRETATION
Cultural characteristics observed after incubation.

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

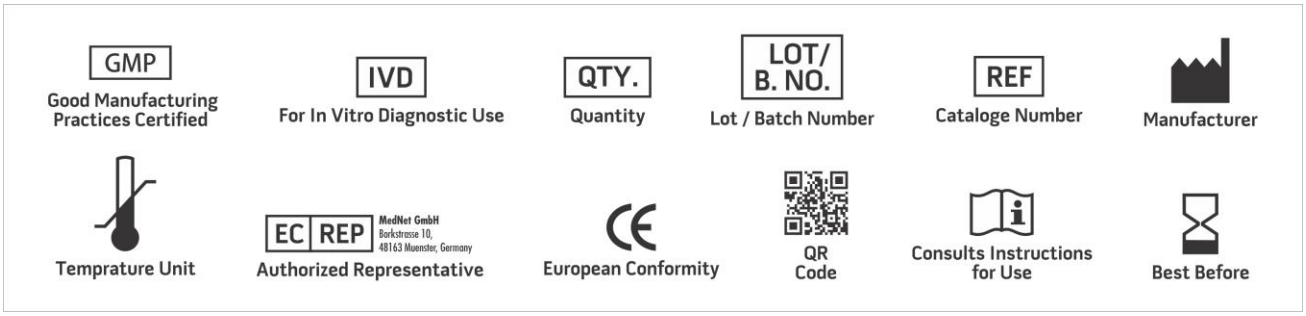
Escherichia coli	23724	50-100	Good	35-37 °C	18-24 Hours
Escherichia coli	33694	50-100	Good	35-37 °C	18-24 Hours
Escherichia coli	33849	50-100	Good	35-37 °C	18-24 Hours
Escherichia coli	39403	50-100	Good	35-37 °C	18-24 Hours
Escherichia coli	47014	50-100	Good	35-37 °C	18-24 Hours

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. Atlas, R.M., L.C. Parks (1993) Handbook of Microbiological Media. CRC Press, Inc. London1
2. Lennox. 1955. Virology 1:190.
3. Sambrook, Fritsch and Maniatis. 1989. Molecular cloning: a laboratory manual, 2nd ed. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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