52062 LB-Agar, high salt (Luria Bertani Agar, high salt)

Luria Media are used for the cultivation and maintenance of recombinant strains of *E. coli* for genetic and molecular studies. It is also a general medium for *E. coli* in fermentation, molecular genetic studies and may be used for routine cultivation of not particularly fastidious microorganisms.

Composition:

Ingredients	Grams/Litre
Casein enzymic hydrolysate	10.0
Yeast extract	5.0
Sodium chloride	10.0
Agar	15.0

Final pH 7.5+/-0.2 at 25°C

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions:
Suspend 40 g in 1000 ml of purified water. Heat with frequent agitation and boil for one minute. Sterilize at 121°C for 15 minutes. Dispense as desired.

Principle and Interpretation:
The media are nutritionally rich suitable for the growth of pure cultures like recombinant strains. *Escherichia coli K12* and derived strains are deficient in Vitamin B synthesis and modified by specific mutation to create auxotrophic organisms, that means they are not able to grow on nutritionally poor media. Casein enzymic hydrolysate and Yeast extract serve as a source of nitrogen, sulfur, carbon, minerals and vitamins while Yeast extract also contains Vitamin B complex. Sodium chloride provides sodium ions for the membrane transport and maintains osmotic equilibrium of the medium. Agar is used as a solidification agent.
For molecular genetic studies the LB medium is often supplemented with kanamycin (Cat. No. 60615), zeocin (Cat. No. 80041), ampicillin (Cat. No. 10044), IPTG (Cat. No. 59740) and X-gal (Cat. No. 16664). These products help to determine the transformation rate from *E. coli* with the blue/white screening method.

Cultural characteristics after 24 hours at 35-37ºC.

Organisms (ATCC)	Growth
Escherichia coli (25922)	++
Escherichia coli (11775)	++

References:
1. H. Miller, Meths. Enzymol., 152, 145 (1987)
2. S. Heber, B.E. Tropp, Biochim. Biophys., Acta 1129, 1 (1991)
3. E.S. Lennox, Transduction of Linked Genetic Characters of the host by bacteriophages P1, Virology, 1, 190 (1955)
4. R.M. Atlas, Handbook of Microbiological Media, Ed. by Parks L., CRC Press, Inc. (1993)

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.