

SOB (Super Optimal Broth)



Medium used for the cultivation and enumeration of recombinant strains of *Escherichia coli*.

*Equally use with SOC (Super Optimal broth with Catabolite repression) Broth (MB-S0816).

• CONTENTS (Liter)

Tryptone	20.0 g
Yeast Extract	5.0 g
Sodium Chloride	0.5 g
Magnesium Sulfate	2.4 g
Potassium Chloride	0.186 g
Final pH = 7.0 ± 0.2 at 25°C	

• PROCEDURE

Suspend 28.09 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. If necessary, aseptically add 20 mL of filter sterilized 20% glucose solution. (SOC Broth). Mix well. Pour into tubes.

• INTERPRETATION

SOB (Super Optimal Broth) is a medium used for the cultivation and enumeration of recombinant strains of *Escherichia coli*. Tryptone is the carbon and nitrogen source. Yeast extract provides vitamin B complex that stimulate the bacterial growth. Sodium chloride maintains the osmotic balance. Magnesium sulfate and potassium chloride provide inorganic ions in the medium. Glucose serves as additional carbon and energy source.

• TECHNIC

Inoculate the specimen using a sterile needle to the medium. Incubate at 35 ± 2°C for 18 - 24 hours. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: light beige

Prepared medium

Appearance: clear

Color: light amber

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

Microorganism	ATCC	Inoculum CFU	Growth
<i>Escherichia coli</i> C600	23724	50-100	good
<i>Escherichia coli</i> HB101	33694	50-100	good
<i>Escherichia coli</i> DH-5	53868	50-100	good

• STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Store prepared medium at 2 - 8°C.

• REFERENCES

1. Hanahan D, 1983. Studies on transformation of Escherichia coli with plasmids, J Mol Biol 166(4):557-80.
2. Sambrook, J., et al., (1989). Molecular Cloning: A Laboratory Manual. 2nd Edition. Cold Spring Harbor Lab. Cold Spring Harbor, N.Y.
3. American Type Culture Collection, Manassas, Va., USA.
4. Sambrook J., Fritsch E. E. and Maniatis T., 1989, Molecular Cloning : A Laboratory Manual, 2nd Ed., Cold Spring Harbor Lab., Cold Spring Harbor, N.Y.

• PACKAGE

Cat. No : MB-S0713 SOB (Super Optimal Broth)	500 G
-------------------------------------------------	-------