

SOB Broth

Code	Description	Size
J906-100G	SOB Broth	100 grams
J906-500G	SOB Broth	500 grams

General Information

VWR Life Science AMRESCO's SOB Broth (Super Optimal Broth) is used for the preparation and transformation of competent cells. This growth medium is nutritionally rich, containing casein hydrolysate and yeast extract as sources of nitrogenous compounds and growth factors, and magnesium sulfate as a supply of magnesium ions necessary for DNA replication. An isotonic environment is maintained by inclusion of sodium chloride in the formulation. This is critical for survival of competent cells, which have been perforated in preparation for transformation with recombinant DNA. SOB Broth is supplied as a premixed powder and when dissolved at 25.5 g per liter of water, yields the formulation shown in the table below.

Formulation	Grams/L
Tryptone	20
Yeast Extract	5
Sodium Chloride	0.5

Storage/Stability

Store SOB Broth powder at room temperature (18 – 26°C).
Store prepared medium cold (2 – 8°C).

Product Use Limitations

For research use only. Not for therapeutic or diagnostic use.

Materials Required but Not Supplied

1 M MgSO₄, Sterile

Protocol/Procedure

SOB Broth preparation

1. Suspend 25.5 g of SOB Broth powder in 1 L of purified water.
2. Allow the powder to dissolve with gentle stirring and heating, if necessary.
3. Autoclave for 15 minutes at 15 psi at 121°C. **Note:** *Alternatively, medium may be sterile-filtered.*
4. Allow the solution to cool to 50°C or below before adding supplemental components and antibiotic.
5. Add 20 mL of 1 M MgSO₄.

Frequently Asked Questions

Question	Answer
What is the typical OD ₆₀₀ obtained for <i>E. coli</i> cultures?	The OD ₆₀₀ for <i>E. coli</i> grown in SOB ranges from 3 to 5 when using standard conditions of 37°C with shaking at 250 rpm. A higher OD ₆₀₀ may be achieved by culturing with greater aeration.
Can SOB powder be used to prepare SOC media?	SOC medium may be prepared by including 20 mM glucose in the SOB. It is recommended to sterile filter the glucose and add it after the autoclaving step.



For Technical Support

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