

SOC Medium

#GCM12.0500 (500g)
(FOR RESEARCH ONLY)



Product: SOC medium is a rich growth medium, optimized for the preparation and transformation of competent cells. Transformation requires perforation of bacteria in order to allow DNA to enter the cell. In order to help to survive this process, competent cells need isotonic rich media such as SOC. It contains all the nutritional requirements for *Escherichia coli*.

Tryptone and Yeast Extract are the sources for carbon, nitrogen, vitamins, minerals, and amino acids essential for growth. Sodium chloride and potassium chloride supply essential electrolytes for transport and osmotic balance, whereas magnesium sulfate serves as a source for magnesium ions. Glucose is used as an additional carbon and energy source facilitating repair of the perforation as well as replication.

Quantity: 500g

Formulation (g/L)

Tryptone:	20.00	Yeast Extract:	5.00	KCl	0.186
NaCl:	0.50	MgSO ₄ :	0.96	Glucose	3.60
Final pH (25°C):	7.0 ± 0.2				

Appearance: Beige powder. Autoclaved medium should be amber, slightly opalescent

Storage: 2°C – 25°C. When not in use, keep container closed to avoid hydration.

QC: Each lot is tested by inoculating freshly prepared medium with a single colony of *Escherichia coli* ATCC 23724 and observation after incubation at 35 ± 2°C for 18 – 24h.

Bibliography:

Sambrook and Russell (2006) In: The condensed protocols from Molecular cloning: a laboratory manual, 1st ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY.

Preparation:

Add 30.2g of the dehydrated medium to one liter of distilled water. Mix well and dissolve by heating with regular agitation. Boil for 1 minute in order to dissolve completely. Dispense in appropriate containers and sterilize by autoclaving at 121°C for 15 to 20 minutes. Store at 2°C to 8°C.