



Technical Data

HiEncap™ SOC Growth Medium

ECG015D

HiEncap™ SOC Growth Medium is a special medium for competent cells to allow expression of transferred resistance genes before exposing cells to selective conditions.

Composition**

Ingredients	Gms / Litre
Tryptone	20.000
Yeast extract	5.000
Sodium chloride	0.500
Magnesium sulphate, hepta hydrate	5.000
Glucose	3.600

**Formula adjusted, standardized to suit performance parameters

Directions

Each capsule contains 15.77 gms of dehydrated medium. Suspend 1 capsule in 500ml (2 capsules in 1000 ml) distilled or purified water. Heat to boiling to dissolve the medium completely. Dispense as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

SOC Growth Medium is a special medium for incubating competent cells immediately after transformation to allow expression of transferred resistance genes before exposing cells to selective conditions (1). E. coli cells are first made competent during transformation where perforations are made in the bacterial cells so that the foreign DNA can penetrate the cells. To repair cells from this damage SOC medium is used. This medium is same as SOB medium except glucose is added as the carbon source which repairs the perforations of the E. coli cells. Furthermore, the transferred resistance genes are expressed in this medium before exposure to selective conditions (1). Tryptone provides nitrogen, amino acids and other growth factors which permit the cells to go through the stress of transformation. Vitamins and trace elements are contained in Yeast Extract. Sodium chloride provides essential ions for transport and osmotic balance. Magnesium sulfate provides magnesium ions which are required in a variety of enzymatic reactions, including DNA replication.

Quality Control

Appearance

Gelatin capsule containing cream to yellow coloured granular media

Prepared Medium

Light yellow clear solution without any precipitate.

Quantity

Each capsule contains 15.77 grams of medium sufficient for 500 ml media

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth
<i>Escherichia coli</i> ATCC 23724	50-100	good-luxuriant
<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant
<i>Escherichia coli</i> DH5 alpha MTCC 1652	50-100	good-luxuriant

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Sambrook J., E. F. Fritsch, and T. Maniatis. 1989. Molecular cloning: A Laboratory manual, 2nd ed. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y.

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