



Technical Data

HiEncap™ SOB Growth Agar

ECG016CCL

HiEncap™ SOB Growth Agar is used for preparing competent host cells prior to transformation.

Composition**

Ingredients	Gms / Litre
Tryptone	20.000
Yeast extract	5.000
Sodium chloride	0.500
Magnesium sulphate, hepta hydrate	5.000
Agar	15.000

**Formula adjusted, standardized to suit performance parameters

Directions

Each capsule contains 10.74 gms of medium. Suspend 1 capsule in 250 ml (4 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

SOB Growth Agar is used for preparing competent cells prior to transformation. Super Optimal Broth (SOB medium) Growth Medium was first formulated by Douglas Hanahan in 1983 as a nutritionally enriched growth media for bacteria, especially *Escherichia coli* (1). It is used in the preparation and transformation of chemically competent cells. *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 (2). To endure this process, competent cells require a rich isotonic medium. 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 (2). This media contains agar as the solidifying agent.

Quality Control

Appearance

Gelatin capsule containing cream to yellow coloured granular media

Prepared Medium

Light amber clear to slight opalescent gel forms in Petri plates.

Quantity

Each capsule contains 10.74 grams of medium sufficient for 250 ml media

Cultural Response

ECG016CCL: Cultural characteristics observed after an incubation at 35-37°C for 18- 48 hours.

Organism	Growth	Inoculum (CFU)	Recovery
<i>Escherichia coli</i> ATCC 25922	good-luxuriant	50-100	>=70%

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. Hanahan, D., 1983. J. Mol. Biol.166:557. 2. 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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