SOC Growth Medium **G015**

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.

Composition :**

Ingredients	Grams/Litre
Tryptone	20.00
Yeast extract	5.00
Sodium chloride	0.50
$MgSO_4$, $7H_2O$	5.00
Glucose	3.6

** Formula adjusted, standardized to suit performance parameters

Directions :

Suspend 31.54 grams of dehydrated media in 1000 ml distilled water. Heat if necessary 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 of Powder :
Light yellow coloured, homogeneous, free flowing powder.
Colour and Clarity :
Light yellow coloured, clear solution without any precipitate.

Please refer disclaimer Overleaf

ISO 9001-2015 CERTIFIED
WHO GMP CERTIFIED
ISO 13485-2016 CERTIFIED

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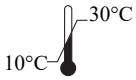
Cultural Response :
Cultural characteristics observed after an incubation at 35-37°C for 18 - 48 hours.

Organisms (ATCC)	Growth
Escherichia coli ATCC 23724	good-luxuriant
Escherichia coli ATCC 25922	good-luxuriant
Escherichia coli MTCC1652	good-luxuriant

Storage and Shelf-life :
Store below 30°C and the prepared medium at 2 - 8°C. Use before expiry date on the label.

References:

(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.



Storage temperature


Do not use if package is damaged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