SOC Medium, Liquid

Catalog Number **MM 006-01**
Storage Temperature 2~8°C

Product Description

SOC medium is widely used to support the transformation of *E. coli* with a foreign DNA such as plasmid DNA. Foreign DNA is inserted by $CaCl_2$ and heat-shock, after which four time the amount of SOC liquid medium is added for cultivation. Spread the medium onto a SOB agar plate after 45 minutes.

Storage/Stability

SOC medium should be stored at 2~8°C. Deterioration of SOC medium may be recognized by (1) precipitate or particulate matter throughout the solution, (2) cloudy appearance, (3) color change, and/or (4) pH change. Product label bears expiration date.

Biological Performance Characteristics

The components of SOC medium should not be autoclaved together because the high temperature can cause the glucose to react with tryptic peptides (see Maillard reaction), compromising the quality. SOB and magnesium and glucose additive solutions can be autoclaved separately and mixed afterwards to final concentrations. Complete SOC can be filter sterilized through a 0.22 μm filter. SOC Medium is tested to ensure conformance with the most current approved product specification. This currently consists of tests for pH, sterility, and transformation efficiency using TOP10 *E. coli*.

Precautions

For *In Vitro* Use Only

Components	MM 006-01
Bacto-Tryptone	20.0 g/L
Bacto-Yeast extract	5.0 g/L
NaCl	0.5 g/L
KCl	2.5 mM
$MgCl_2$	10.0 mM
Glucose	20.0 mM

Product Profile	
Appearance	Yellow transparent solution
pH at RT	6.8 ~ 7.2
Sterility	Sterilized by Autoclave system(121°C, 15 lb/sq. in., 20 min,tryptone, Yeast extract, NaCl, KCl, $MgSO_4$). Sterile-fitered(glucose) Sterility tests are performed in accordance with protocols described in SOP.

References

Hanahan, D. (1983). Studies on Transformation of Escherichia coli with Plasmids. J. Mol. Biol. 166, 557-580.
Green, Michael R., and Joseph Sambrook. Molecular cloning: a laboratory manual. New York: Cold Spring Harbor Laboratory Press, 2012.

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