Technical Information

SD Growth Medium w/o LEU-TRP

Product Code: G1068

SD Growth Medium w/o LEU-TRP is a synthetic defined media for the growth of *Saccharomyces cerevisiae*.

Composition**

Ingredients	Grams/Litre
Potassium dihyrogen phosphate	1.00
Magnesium sulphate	0.50
Sodium chloride	0.10
Calcium chloride	0.10
Biotin	0.002 gm
Calcium pantothenate	0.4 mg
Folic acid	0.002 mg
Inositol	2.00 mg
Niacin	0.4 mg
PABA	0.2 mg
Pyridoxin, HCl	0.4 mg
Riboflavin	0.2 mg
Thiamine HCl	0.4 mg
Boric acid	0.5 mg
Copper sulphate	0.04 mg
Potassium iodide	0.1 mg
Ferric chloride	0.2 mg
Manganese sulphate	0.4 mg
Sodium molybdate	0.2 mg
Zinc sulphate	0.4 mg
Ammonium sulphate	5.00
Dextrose	20.00
Adenine	0.010
L-Arginine HCl	0.050
L-Aspartic acid	0.080
L-Histidine HCl	0.020
L-Isoleucine	0.050
L-Leucine	0.100
L-Lysine HCl	0.050
L-Methionine	0.020
L-Phenylalanine	0.050
L-Threonine	0.100
L-Tryptophan	0.050
L-Tyrosine	0.050
Uracil	0.020
L-Valine	0.140

** Formula adjusted, standardized to suit performance parameters

Methodology

Suspend 27.34 grams in 1000 ml distilled water. Sterilize by autoclaving at 10 lbs pressure (115°C) for 20 minutes. Mix well and dispense as desired.

Principle and Interpretation

SD Growth Medium w/o LEU-TRP is a synthetic defined media for the selective growth of *Saccharomyces cerevisiae*. Synthetically Defined media known as Yeast Nitrogen Base Media for the growth of Yeast cells were first cited by Wickerham (1, 2). SD Growth Medium w/o LEU-TRP includes a yeast nitrogen base along with ammonium sulfate, and dextrose as the carbon source, which is further supplemented with various amino acids except leucine and tryptophan which makes it a dropout growth medium for yeast cells. A leucine and tryptophan auxotrophic yeast mutant cannot grow on this media but a wild-type or a leucine and tryptophan prototrophic yeast strain can grow. The leucine and tryptophan auxotroph has a mutation in the genes (e.g. *LEU2 TRP1*) of the leucine and tryptophan synthesis pathway and this mutant strain will grow in this medium if leucine and tryptophan is supplied from outside e.g. from a plasmid which contains *LEU2* and *TRP1* gene (3). For this purpose, a *leu2trp1* mutant strain of *S. cerevisiae* is transformed with a *LEU2* and *TRP1* containing plasmid and the transformants can be selected by growing the cells on SD Growth Media w/o LEU-TRP. Hence this medium is very useful in molecular genetics.

Quality control

Appearance of Powder :
White to light cream coloured, homogeneous, free flowing powder.
Colour and Clarity :
Colourless to light yellow coloured, clear solution without any precipitate.
Cultural Response :
Cultural characteristics observed after an incubation at 25-30°C for 18 - 48 hours.

Organisms (ATCC)	Growth
Saccharomyces cerevisiae ATCC 9763	good-luxuriant

Storage and Shelf Life

- Upon receipt, store at 2 - 8°C. Use before expiry date on the label.

Reference

1. Wickerham L. J., 1951, U.S. Dept. Agric. Tech. Bull. No. 1029
2. Wickerham L. J., 1946, J. Bacteriol., 52:293
3. Kaiser, C., et al. Methods in Yeast Genetics Cold Spring Harbor, (1994)

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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