SD Growth Medium w/o ADE-LEU-URA-HIS **G161**

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

Composition:**

Ingredients	Grams/Litre
Potassium dihydrogen phosphate	1.00
Magnesium sulphate	0.50
Sodium chloride	0.10
Calcium chloride	0.10
Biotin	0.002 mg
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
L-Arginine HCl	0.050
L-Aspartic acid	0.080
L-Isoleucine	0.050
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
L-Valine	0.140

** Formula adjusted, standardized to suit performance parameters

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

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Directions:

Suspend 27.30 grams in 1000 ml distilled water. Sterilize by autoclaving at 10 lbs pressure (115ºC) for 20 minutes. Mix well and dispense as desired.

Principle and Interpretation:

SD Growth Medium w/o ADE-LEU-URA-HIS 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 ADE-LEU-URA-HIS includes a yeast nitrogen base along with Ammonium sulfate and dextrose as the carbon source, which is further supplemented with various amino acids except adenine, leucine and histidine. Furthermore, the medium is devoid of uracil, the pyrimidine derivative. This makes it a dropout growth medium for yeast cells. An adenine, leucine, uracil and histidine auxotrophic yeast mutant strain cannot grow on this media but a wild-type or an adenine, leucine, uracil and histidine prototrophic yeast strain can grow. The adenine, leucine, uracil and histidine auxotroph have mutation in the genes (e.g. *ADE2, LEU2*, *URA3 and HIS3*) of the adenine, leucine, uracil and as well as histidine synthesis pathway and this mutant strain will grow in this medium if adenine, leucine, uracil and histidine are supplied from outside e.g. from plasmids which contain *ADE2, LEU2*, *URA3 and HIS3* gene (3). For this purpose, an *ade2leu2ura3his3* mutant strain of *S. cerevisiae* is transformed with *ADE2, LEU2*, *URA3 and HIS3* containing plasmid and the transformants can be selected by growing the cells on SD Growth Medium w/o ADE-LEU-URA-HIS.

Please refer disclaimer Overleaf

Quality Control:

Appearance of Powder:
White to cream coloured, homogeneous, free flowing powder.
Colour and Clarity:
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	good-luxuriant

Storage and Shelf-life:

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

References:

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)

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