

**SD Growth Medium w/o HIS**

**G064**

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

**Composition\*\* :**

<b>Ingredients</b>	<b>Grams/Litre</b>
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
Adenine	0.010
L-Arginine HCl	0.050
L-Aspartic acid	0.080
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

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L-Tyrosine	0.050
Uracil	0.020
L-Valine	0.140

\*\* Formula adjusted, standardized to suit performance parameters

### **Directions :**

Suspend 27.47 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 HIS is a synthetic defined agar 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 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 histidine which makes it a dropout growth medium for yeast cells. A histidine auxotrophic yeast mutant cannot grow on this media but a wild-type or a histidine prototrophic yeast strain can grow. The histidine auxotroph has a mutation in a gene (e.g. *HIS3*) of the histidine synthesis pathway and this mutant strain will grow in this medium if histidine is supplied from outside e.g. from a plasmid which contains *HIS3* gene (3). For this purpose, a *his3* mutant strain of *S. cerevisiae* is transformed with a *HIS3* containing plasmid and the transformants can be selected by growing the cells on SD Growth Media w/o HIS. Hence this medium is very useful in molecular genetics.

### **Quality Control :**

#### **Appearance of Powder :**

Off-white to cream colored, homogeneous, free flowing powder.

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### Colour and Clarity :

Light yellow coloured, clear solution.

### Cultural Response :

Cultural characteristics observed after an incubation at 25-30°C for 18 - 48 hours.

### Organisms (ATCC)

*Saccharomyces cerevisiae* ATCC 9763

### Growth

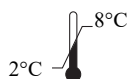
good-luxuriant

### 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)



Storage temperature



Do not use if package is damaged



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