

SD Growth Medium w/o URA**G067**

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

Composition :**

Ingredients	Grams/Litre
Potassium phosphate, monobasic	1.00
Magnesium sulphate	0.50
Sodium chloride	0.10
Calcium chloride	0.10
D-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
Pyridoxine, 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-Histidine HCl	0.020
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

SD Growth Medium w/o URA

G067

L-Tyrosine	0.050
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 115°C for 20 minutes. Mix well and dispense as desired.

Principle and Interpretation :

Synthetically Defined media known as Yeast Nitrogen Base Media for the growth of Yeast cells were first cited by Wickerham (1,2). Synthetic defined (SD) Growth Medium include a yeast nitrogen base along with ammonium sulfate, and a carbon source, which is further supplemented with various amino acids that makes it a complete growth medium for yeast cells. This medium can be used for growing all types of yeast cells without addition of any protein, amino acids, hormones, sources of energy, salts, vitamins, etc.

SD Growth Medium w/o URA is a synthetic defined media that is devoid of Uracil and is used for the selective growth of *Saccharomyces cerevisiae*.

In genetics, a strain is said to be auxotrophic if it carries a mutation that renders it unable to synthesize an essential compound. Auxotrophy is the inability of an organism to synthesize a particular organic compound required for its growth. For example a yeast mutant in which a gene of the uracil synthesis pathway is inactivated is a uracil auxotroph. Such a strain is unable to synthesize uracil and will only be able to grow if uracil can be taken up from the environment. This is the opposite of a uracil prototroph, or a wild-type strain, which can grow in the absence of uracil. SD Growth Medium w/o URA is used to grow and select uracil auxotrophs. Auxotrophic genetic markers are often used in molecular genetics.

Quality Control :

Appearance of Powder :

Cream to light yellow coloured, homogeneous, free flowing powder.

Colour and Clarity of prepared medium:

Light yellow coloured, clear solution without any precipitate.

Cultural Response :

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

SD Growth Medium w/o URA

G067

Organisms (ATCC)

Saccharomyces cerevisiae

Growth

good-luxuriant

References :

1. Wickerham L. J., 1951, U.S. Dept. Agric. Tech. Bull. No. 1029.
2. Wickerham L. J., 1946, J. Bacteriol., 52:293.

Storage and Shelf-life :

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