

Technical Information

SD Growth Medium w/o URA

Product Code: G1067

SD Growth Medium w/o URA is a synthetic defined media for the 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
D-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-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
L-Tyrosine	0.050
Uracil	0.020
L-Valine	0.140

** Formula adjusted, standardized to suit performance parameters

Methodology

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

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 :

White to cream 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.

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.

Reference

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

Disclaimer :

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