

Yeast Nitrogen Base w/o Amino Acids

Cat. 1545

For yeast classification based on amino acids and carbohydrates requirements

Practical information

Applications	Categories
Differentiation	Yeasts

Industry: Food

Principles and uses

Yeast Nitrogen Base w/o Amino Acids is used for classifying yeasts based on carbon and nitrogen requirements and is prepared according to the formulas of Wickerharm and Burkholder. The medium contains all the essential vitamins and inorganic salts needed to cultivate yeasts, except for the amino acids and carbohydrate sources. Ammonium sulphate is included as a readily available nitrogen source for nitrogen assimilation.

This medium is used in many applications for the study of yeast in molecular biology as is useful for the determination of aminoacids and carbohydrate utilization.

Formula in g/L

Ammonium sulfate	5	Boric acid	0,0005
Calcium chloride	0,1	Calcium pantothenate	0,0004
Ferric chloride	0,0002	Inositol	0,002
Magnesium sulfate	0,5	Manganese sulfate	0,0004
Monopotassium phosphate	1	Niacin	0,0004
P-Aminobenzoic acid	0,0002	Potassium iodide	0,0001
Pyridoxine hydrochloride	0,0004	Riboflavin	0,0002
Sodium chloride	0,1	Sodium molybdate	0,0002
Thiamine chlorhydrate	0,0004	Zinc sulfate	0,0004
Copper sulfate (mg)	0,04	Folic acid (mg)	0,002
Biotin (mg)	0,002		

Preparation

Prepare a 10X solution by dissolving 6,7 grams of the medium in 100 ml of distilled water with 5 grams of dextrose, or the equivalent amount of another carbohydrate, and 5-10 mg of the desired amino acid. Mix well. Heat with frequent agitation until complete dissolution. DO NOT BOIL. DO NOT AUTOCLAVE. Sterilize the solution by filtration. Prepare the final medium by aseptically pipetting 0,5 ml of the 10X solution to 4,5 ml of distilled water. Swirl to mix solution before inoculation.

Instructions for use

- Inoculate de prepared tubed medium very lightly with the test organism.
- Incubate at 25-30 °C for 2-5 days.
- After incubation, shake the tubes to suspend growth.
- Read for growth.
- Carry out the carbon and nitrogen assimilation tests described in reference manuals.

Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Fine powder	Off-white	Ambar	5,4±0,2

Microbiological test

Incubation conditions: (25-30 °C / 2-5 days).

Microrganisms	Specification
Candida albicans ATCC 10231	Good growth
Sacharomyces cerevisiae ATCC 9080	Good growth
Kloeckera apiculata ATCC 9774	Good growth

Storage

Temp. Min.:2 °C

Temp. Max.:25 °C

Bibliography

Shadomy, S., and Espinel Ingroff, A. 1980. Susceptibility Testing with Antifungal Drugs, p. 647-653. In E. H. Lennete, A. Balows, W. J. Hausler, Jr., and J.P. Truant, Manual of Clinical Microbiology, 3rd Ed., American Society for Microbiology, Washington, D.C. U.S. Dept. Agric. Tech. Bull. No. 1029,1951.