TM 495 - YEAST CARBON BASE

INTENDED USE

For classification of yeasts based on their ability to assimilate nitrogen compounds.

PRODUCT SUMMARY AND EXPLANATION

Yeasts are unicellular fungi. They are easily differentiated from most bacteria because of their relatively larger size and morphological features. Yeasts are used for synthesizing certain fats, vitamins and proteins from simple sugars and ammonium nitrogen. They are also known to cause plant and animal diseases, spoil food and bring about deterioration of textiles and other materials. Yeast Carbon Base, developed by Wickerham, is used for the classification of yeasts on the basis of their ability to assimilate various nitrogen compounds. The nitrogen assimilation ability is tested by adding various nitrogen sources such as ammonium sulphate, urea, potassium nitrate, asparagine, peptone.

COMPOSITION

Ingredients	Gms / Ltr
Dextrose	10.000
L-Histidine hydrochloride	0.001
DL-Methionine	0.002
DL-Tryptophan	0.002
Biotin	0.000002
Calcium pantothenate	0.0004
Folic acid	0.000002
Inositol	0.002
Niacin	0.0004
p-Amino benzoic acid (PABA)	0.0002
Pyridoxine hydrochloride	0.0004
Riboflavin (Vitamin B2)	0.0002
Thiamine hydrochloride	0.0004
Boric acid	0.0005
Copper sulphate	0.00004
Potassium iodide	0.0001
Ferric chloride	0.0002
Manganese sulphate	0.0004
Sodium molybdate	0.0002
Zinc sulphate	0.0004
Monopotassium phosphate	1.000
Magnesium sulphate	0.500
Sodium chloride	0.100
Calcium chloride	0.100

PRINCIPLE

Yeast Carbon Base is composed of a defined set of nutrients including carbon source, amino acids, vitamins and minerals required for the growth of yeasts. The inclusion of vitamins in this base was found necessary by Wickerham as an aid for utilization of nitrogen compounds by certain yeasts as they cannot assimilate these compounds in the absence of vitamins.

INSTRUCTION FOR USE

For Nitrogen Assimilation test, prepare the broth base in 10X concentration.

- Dissolve 11.71 grams in 100 ml distilled water. Add sterile nitrogen source as desired to it. Warm if necessary to dissolve the medium completely. Sterilize by filtration.
  For detection of yeasts, other than *Saccharomyces cerevisiae*.
- Dissolve 2.35 grams of Yeast Carbon Base in 100 ml distilled water.
  For detection and enumeration of wild yeasts in beer and other brewing materials
- Add 0.33 grams of Ammonium sulphate and 4 grams of agar to Base prepared as per B. Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: White to cream homogeneous free flowing powder.
Appearance of prepared medium	: colourless clear solution without any precipitate.
pH (at 25°C)	: 5.5±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth (plain)	Growth (with Ammonium sulphate)	Incubation Temperature	Incubation Period
Saccharomyces cerevisiae	9763	10-100	None-poor	Good	25-30°C	6-7 days
Saccharomyces uvarum	28098	10-100	None-poor	Good	30°C	24-48 Hours

PACKAGING:

In pack size of 100 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for

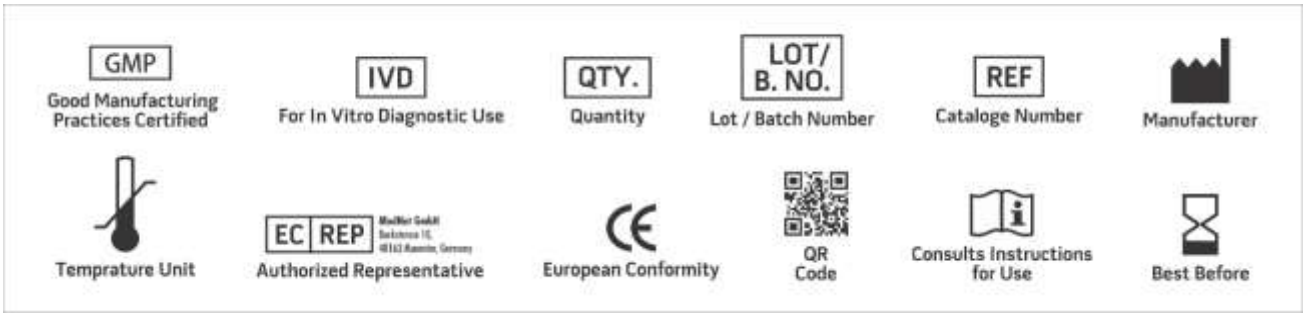
the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Pelczar M. J. Jr., Reid R. D., Chan E. C. S., 1977, Microbiology, 4th Ed., Tata McGraw-Hill Publishing Company Ltd., New Delhi.
2. Wickerham L. J., 1951, U.S. Dept. Agric. Tech. Bull. No. 1029.
3. Wickerham L. J., 1939, J. Tropical Med. Hyg. 42:176
4. Wickerham L. J., 1948, J. Bacteriol., 56:363.
5. Wickerham L. J., 1943, J. Bacteriol., 46:501.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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