



PRODUCT SPECIFICATION SHEET

Yeast Nitrogen Base (DM718)

Intended Use

Yeast Nitrogen Base (DM718) is recommended for classification of yeast based on their ability to assimilate carbon compounds

Product Summary and Explanation

Yeasts are unicellular, eukaryotic, budding cells that are generally round-to-oval or elongate in shape. Principally, they multiply by the production of blastoconidia (buds).⁽¹⁾ Yeast colonies are moist and creamy or glabrous to embranous in texture.⁽¹⁾ Yeasts are considered opportunistic pathogens.⁽¹⁾

Yeast Nitrogen Base is formulated as per Wickerham⁽²⁾ for investigations of yeasts for their different abilities in carbon assimilation. It is a suitable medium for studying strains of yeast that require certain vitamins. With added carbon source it may also be used for susceptibility testing with antifungal drugs when defined liquid medium is needed.^(3,4) These media are included in many applications for the study of yeasts in molecular genetics.^(5,6)

Principles of the Procedure

Yeast Nitrogen Base contains all essential nutrients and vitamins necessary for the cultivation of yeasts except a source of carbohydrate.

Formula / Liter

Ingredients	Gms / Liter
Ammonium sulphate	5.00
L-Histidine hydrochloride	0.01
DL-Methionine	0.02
DL-Tryptophan	0.02
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	1.00
Magnesium sulphate	0.50
Sodium chloride	0.10
Calcium chloride	0.10
Final pH: 5.4 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	





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Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions

1. For best results, the medium should be prepared in 10X strength.
2. Suspend 6.75 grams in 100 ml distilled water.
3. Add 5 grams of dextrose or an equivalent amount of other carbohydrate.
4. Warm if necessary to dissolve the medium completely.
5. Sterilize by filtration.
6. Keep refrigerated until use.
7. Final medium is made by pipetting 0.5 ml into 4.5 ml of sterile distilled water.

Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Colourless (at 10X concentration colour of medium is pale yellow) clear solution without any precipitate.
Reaction of 0.67% Solution	pH : 5.4 ± 0.2 at 25°C
Gel Strength	Not Applicable

Expected Cultural Response: Cultural characteristics observed after an incubation at 25-30°C for 6-7 days (longer if necessary for upto 24 days).

Sr. No.	Organisms	Results to be achieved	
		Growth (Plain)	Growth w/ Dextrose
1.	<i>Kloeckera apiculata</i> ATCC 9774	none-poor	good
2.	<i>Saccharomyces cerevisiae</i> ATCC 9763	none-poor	good
3.	<i>Saccharomyces uvarum</i> ATCC 28098	none-poor	good

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

1. Inoculate the prepared tubed medium very lightly with the test organism.
2. Incubate at 25°C for 6-7 days.
3. After incubation (6-7 days and, if necessary, 20-24 days), shake the tubes to suspend growth.
4. Read for growth.

Results

1. Draw lines with India ink on a paper and hold the paper against the Yeast Nitrogen Base tubes.
2. If lines are not seen or appear diffused through the culture, the test is considered positive and if lines are distinguishable, test is negative.

Storage

Store the sealed bottle containing the dehydrated medium at 10- 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.





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Limitations of the Procedure

1. Yeasts grown on a rich medium may carry a reserve of nitrogen in the form of protein. Possible errors due to this reserve are eliminated by making two serial transfers in the complete medium.
2. When the first transfer is seven days old, the culture is shaken and one loopful is transferred to a second tube of the complete medium containing the same source of nitrogen. If a positive test is obtained when the second culture is seven days old, the organism being tested assimilates this particular nitrogen source.
3. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Yeast Nitrogen Base

Product Code : DM718

Available Pack sizes : 100gm

References

1. Warren and Hazen. 1995. *In* Murray, Baron, Pfaller, Tenover and Tenover (ed.), Manual of clinical microbiology, 6th ed. American Society for Microbiology, Washington, D.C.
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3. Lennette E. H., Balows, Hausler and Truant, (Eds.), 1980, Manual of Clinical Microbiology, 3rd Ed., ASM, Washington D.C.
4. Padhye A. A., 1981, Diagnostic Procedures for Bacterial, Mycotic and Parasitic Infections, 6th Ed., APHA, Washington, D.C.
5. Sherman, Fink and Hicks. 1986. Methods in yeast genetics. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y.
6. Brownstein, Silverman, Little, Burke, Korsmeyer, Schlessinger and Olson. 1989. Science. 244:1348.

Further Information

For further information please contact your local MICROMASTER Representative.



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