



PRODUCT SPECIFICATION SHEET

Nutrient Agar, pH 6.0 w/ 0.8% NaCl (DM182)

Intended Use

Nutrient Agar, pH 6.0 w/ 0.8% NaCl (DM182) is recommended for cultivation of bacteria requiring slightly acidic pH.

Product Summary and Explanation

In early 20th century, the American Public Health Association published the formula for a general purpose medium for the growth of a wide variety of non-fastidious microorganisms. Nutrient Agar is used for the examination of water and dairy products according to Standard Methods for the Examination of Water and Wastewater⁽¹⁾ and Dairy Products.⁽²⁾ Additionally, it can also be used for cultivating several less fastidious microorganisms. In the third edition of Standard Methods of Water Analysis it has been recommended to use beef extract instead of infusion of meat in the Nutrient Agar preparations.⁽³⁾ Nutrient Agar, pH 6.0 with 0.8% NaCl is a modification of Nutrient Agar w/ 0.8 % NaCl and recommended by APHA.⁽⁴⁾ In the former, the pH of the medium is adjusted to 6.0 to allow the growth of organisms requiring slightly acidic pH. Since the medium contains 0.8 % sodium chloride, it can be used as a base for enrichment with blood or ascetic fluid or other supplements for cultivation of fastidious microorganisms. Sodium chloride maintains the osmotic balance so that red blood cells do not rupture when blood is added as supplement.⁽¹⁾ Nutrient media may be used as enriched media by the addition of 10% blood or other biological fluids like ascetic fluid, serum etc.

Principles of the Procedure

Nutrient Agar, pH 6.0 w/ 0.8% NaCl contains beef extract and peptic digest of animal tissue which provides the necessary nitrogen compounds, carbon, vitamins and also some trace ingredients to the non-fastidious organisms like *Bacillus subtilis* and *Staphylococcus aureus*. Sodium chloride maintains osmotic equilibrium of the medium.

Formula / Liter

Ingredients	Gms / Liter
Peptic digest of animal tissue	5.00
Beef extract	3.00
Sodium chloride	8.00
Agar	15.00
Final pH: 6.0 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

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

Directions

1. Suspend 31 grams of the medium in one liter of distilled water.
2. Heat to boiling, to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Mix well and pour into sterile petri plates.

Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Light yellow to amber coloured clear to slightly opalescent gel forms in Petri plates
Reaction of 3.1% Solution	pH : 6.0 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel





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Expected Cultural Response: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Recovery
1.	<i>Bacillus subtilis</i> ATCC 6633	50 - 100	good	50-70%
2.	<i>Candida albicans</i> ATCC 10231	50 - 100	good-luxuriant	≥70%
3.	<i>Staphylococcus aureus</i> ATCC 25923	50 - 100	good	50-70%

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

Test Procedure

Refer to appropriate references for standard test procedures.

Results

Refer appropriate references and procedures for interpretation of results.

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.

Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name Nutrient Agar, pH 6.0 w/ 0.8% NaCl

Product Code : DM182

Available Pack sizes : 100gm/ 500gm

References

1. Clesceri L. S, Greenberg A. E. and Eaton A. D., (Eds.), 1998, Standard Methods for the Examination of Water and Wastewater, 20th Ed., APHA, Washington, D.C.
2. American Public Health Association, 1978, Standard Methods for the Examination of Dairy Products, 14th Ed., APHA, Inc., Washington, D.C.
3. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., American Public Health Association, Washington, D.C.
4. American Public Health Association, 1917, Standard Methods of Water Analysis, 3rd ed., APHA, Inc., Washington, D.C.

Further Information

For further information please contact your local MICROMASTER Representative.





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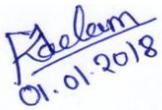


MICROMASTER LABORATORIES PRIVATE LIMITED

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Unit 38/39, Kalpataru Industrial Estate,
Off G.B. Road, Near 'R-Mall', Thane (W) - 400607. M.S. INDIA.
Ph: +91-22-25895505, 4760, 4681. Cell: 9320126789.

Email: micromaster@micromasterlab.com
sales@micromasterlab.com

Prepared By	Checked By	Approved By
 01.01.2018	 01.01.2018	 01.01.2018
Microbiologist	Head Quality Control	Head Quality Assurance

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