



PRODUCT SPECIFICATION SHEET

Algae Culture Broth (DM456)

Intended Use

Algae Culture Broth (DM456) is recommended for cultivation of algae from soil, water and sewage samples and for inoculum preparation for the bioassay of algicidal chemicals.

Product Summary and Explanation

Algae (singular alga) can be referred to as plant-like organisms that are usually photosynthetic and aquatic, that are distributed worldwide in the sea, in freshwater, in moist situations on land and thus are common in terrestrial as well as aquatic environments. They are simple living aquatic organisms that capture light energy through photosynthesis, using it to convert inorganic substances into organic matter. Algae range from single-cell organisms to multicellular organisms, some with fairly complex differentiated form and (if marine) called seaweeds. Various algae play significant roles in aquatic ecology. Humans use algae in a number of ways. They are cultured in clear tanks or ponds and either harvested or used to treat effluents pumped through ponds, as several species are aquatic and microscopic.^(1,2) Algae Culture Broth is similar in composition to Algae Culture Agar, except the agar and is recommended for the isolation and cultivation of algae from soil, water and sewage. Algae Culture Broth is also used to prepare the inoculum for the bioassay of algicidal chemicals.

Principles of the Procedure

Algae Culture Broth contains all necessary nutrients to facilitate good growth of algae but does not provide for other than minimal growth of bacteria and fungi. For preparing stock cultures the surface of slants with the algal culture and incubation at room temperature under a suitable light source. These stock cultures can be maintained for several months.

Formula / Liter

Ingredients	Gms / Liter
Sodium nitrate	1.00
Dipotassium phosphate	0.25
Magnesium sulphate	0.513
Ammonium chloride	0.05
Calcium chloride	0.058
Ferric chloride	0.003
Final pH: 7.0 ± 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 1.87 grams of the medium in one litre of distilled water.
2. Heat if necessary to dissolve the medium completely. Dispense as desired.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.

Quality Control Specifications

Dehydrated Appearance	Off-white to light yellow homogeneous free flowing powder
Prepared Medium	White coloured clear to slightly opalescent gel forms in Petri plates
Reaction of 1.69% Solution	pH : 7.0 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel





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Expected Cultural Response: Cultural characteristics observed under suitable light source after an incubation at 20-25°C within 1 week.

Sr. No.	Organisms	Results to be achieved	
		Inoculum (CFU)	Growth
1.	<i>Chlorella pyrenoidosa</i> ATCC 50476	50 -100	good-luxuriant

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

Test Procedure

Refer appropriate references for standard test procedures.

Results

Refer appropriate references and test 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 : Algae Culture Broth

Product Code : DM456

Available Pack sizes : 500gm

References

1. Lembi C. A. and Waaland J. R., (Ed.), Algae and Human Affairs, 1988, Cambridge University Press.
2. Guiry M. D. and Blunden G., (Ed.), 1991, Seaweed Resources in Europe: Uses and Potential. John Wiley and Sons Ltd.

Further Information

For further information please contact your local MICROMASTER Representative.



MICROMASTER LABORATORIES PRIVATE LIMITED

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

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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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