

TECHNICAL DATA SHEET

Algae Culture Agar

Principle

Algal culture agar is composed of sodium nitrate, dipotassium hydrogen phosphate, magnesium sulphate, ammonium chloride, calcium chloride, ferric chloride and agar. The chemical composition of the culture medium is essential for microalgae growth, and to increase the production of biomass. The sodium nitrate and ammonium chloride are source of nitrogen. Magnesium sulfate and dipotassium hydrogen phosphate concentration maintain in such a manure to provide optimum growth of algae. Calcium chloride and ferric chloride are required for the growth of algae. Agar is solidifying agent.

Use: For isolation and cultivation of algae from soil and water.

Contents*

Ingredients	Gram/Liter
Sodium Nitrate	1.000
Dipotassium Hydrogen Phosphate	0.250
Magnesium Sulphate	0.513
Ammonium Chloride	0.050
Calcium Chloride	0.058
Ferric Chloride	0.003
Agar	15.000
pH at 25°C	7.0 ± 0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 16.87 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45°C and distribute aseptically in petri plate and inoculate test sample aseptically.

Specimens' types analyzed

Soil, water and waste water samples, etc.

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Precautions to be taken

All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	White to off white colored free flowing, homogeneous powder
Reaction of 2.96% solution	7.0 ±0.2 at 25 °C
pH	6.80- 7.20
Color and clarity of ready medium	Colorless, clear to opalescent gel
Growth Promotion properties	Best at ≤ 100 CFU at 20-25°C for 5 to 7 days
Indicative properties	Optimum at ≤ 100 CFU at 20-25°C for 5 to 7 days
Negative control	Performed using sterile distilled water

Different Microbial Response

Prepare medium as per label directions, Inoculate test organism. Incubate at 20-25°C for 5-7 days. Inoculum 50-100 CFU.

Organism	Growth
<i>Chlorella pyrenoidosa</i> (Lab isolate)	Luxuriant

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

Note: Sterilize media immediately after reconstitution.

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Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. *Subba Rao, (1977), Soil Microorganisms and Plant Growth, Oxford and IBH Publishing Co., India.*

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