



## Cyanophycean Agar

M699

### Intended Use:

Recommended for isolation and cultivation of Blue Green algae.

### Composition\*\*

Ingredients	Gms / Litre
Potassium nitrate	5.000
Dipotassium hydrogen phosphate	0.200
Magnesium sulphate	0.100
Agar	15.000

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 20.3 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 3 minutes. Cool to 45-50°C and aseptically add one drop of 1% separately autoclaved solution of ferrous ammonium citrate to 100 ml sterile medium. Mix well and pour into sterile Petri plates.

### Principle And Interpretation

Blue green algae are a type of photosynthetic bacteria, called *Cyanobacteria* that rely on sunlight for energy. They are present in almost all aquatic ecosystems, including creeks, rivers, lakes and wetlands. Algal blooms can cover large areas of a water supply. Like all photosynthetic organisms, blue-green algae rely on sunlight for energy, with their growth rate determined by the level of nutrients available in the water.

Cyanophycean Agar is used for the isolation and cultivation of blue green algae.

Potassium is required for maintenance of maximum growth rate of blue green algae (3). Nitrate serves as nitrogen source. Dipotassium phosphate buffers the media. Magnesium sulphate is a source of divalent cations.

### Type of specimen

Soil from weed samples from aquatic environment.

### Specimen Collection and Handling:

For soil from weed samples from aquatic environment, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(3)

After use, contaminated materials must be sterilized by autoclaving before discarding.

### Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

### Limitations :

1.Due to nutritional variations certain strains may show poor growth.

### Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

## Quality Control

### Appearance

White to cream homogeneous free flowing powder

### Gelling

Firm, comparable with 1.5% Agar gel

### Colour and Clarity of prepared medium

Colourless clear to slightly opalescent gel forms in Petri plates

### Cultural Response

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

Organism	Growth
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<i>Anabena cylindrica</i>	luxuriant
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<i>Anacystis nidulans</i> ATCC 27344	luxuriant
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<i>Plectonema boryanum</i>	luxuriant
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ATCC 18200	
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## Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label.

Product performance is best if used within stated expiry period.

## Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

## Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2<sup>nd</sup> Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. William A., Kratz, Jack Myers, 1955, Nutrition and Growth of Several Blue-Green Algae, American Journal of Botany, Vol. 42, No. 3, pp. 282-287

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### Disclaimer :

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