



Algae Culture Agar

M343

Algae Culture Agar is recommended for the isolation and cultivation of algae from soil, water and sewage. Also for carrying stock cultures of algae used in the bioassay of algicidal chemicals.

Composition**

| Ingredients | Gms / Litre |
|-----------------------|-------------|
| Sodium nitrate | 1.000 |
| Dipotassium phosphate | 0.250 |
| Magnesium sulphate | 0.513 |
| Ammonium chloride | 0.050 |
| Calcium chloride | 0.058 |
| Ferric chloride | 0.003 |
| Agar | 15.000 |
| Final pH (at 25°C) | 7.0±0.2 |

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 16.87 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Algae (singular alga) encompass several groups of relatively 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. Algae are usually found in damp places or water bodies and thus are common in terrestrial as well as aquatic environments. Various algae play significant roles in aquatic ecology. Algae are used by humans in a number of ways. Because many species are aquatic and microscopic, they are cultured in clear tanks or ponds and either harvested or used to treat effluents pumped through ponds (1, 2). Algae Culture Agar is recommended for the isolation and cultivation of algae from soil, water and sewage. Algae Culture Agar is used for maintaining stock cultures of algae used in the bioassay of algacide chemicals. It is a slight modification of the formula of Allen (3). Fitzgerald (4) recommended it for the cultivation of algae.

The medium provides all necessary nutrients for good growth of algae but does not provide for other than minimal growth of bacteria and fungi. Stock cultures are prepared by inoculating 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.

Quality Control

Appearance

Off-white to light yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

White coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 1.69% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

M343: Cultural characteristics observed under suitable light source after an incubation at 20-25°C within 1 week.

| Organism | Inoculum (CFU) | Growth |
|--|----------------|----------------|
| Cultural Response <i>Chlorella pyrenoidosa</i> ATCC 50476 | 50-100 | good-luxuriant |

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on label.

Reference

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.
3. Allen, 1952, Arch. Microbiol., 17:34.
4. Fitzgerald, 1962, Water and Sewage Works, 109:361.

Revision : 2 / 2015

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