TM 647 – ALGAE CULTURE AGAR

INTENDED USE

For isolation and cultivation of algae from soil and water.

PRODUCT SUMMARY AND EXPLANATION

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.

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 algaecide chemicals. It is a slight modification of the formula of Allen. Fitzgerald recommended it for the cultivation of algae. 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.

COMPOSITION

Ingredients	Gms / Ltr
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

PRINCIPLE

The medium provides all necessary nutrients for good growth of algae but does not provide for other than minimal growth of bacteria and fungi The salts included provides nutirents as well as osmotic balance. Agar added is used as a solidifying agent.

INSTRUCTION FOR USE

- Dissolve 16.87 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Off-white to light yellow homogeneous free flowing powder.

Appearance of prepared medium : White coloured clear to slightly opalescent gel forms in Petri plates.

pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Chlorella pyrenoidosa	50476	50-100	Good-luxuriant	>=50%	20-25°C	1 Week

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

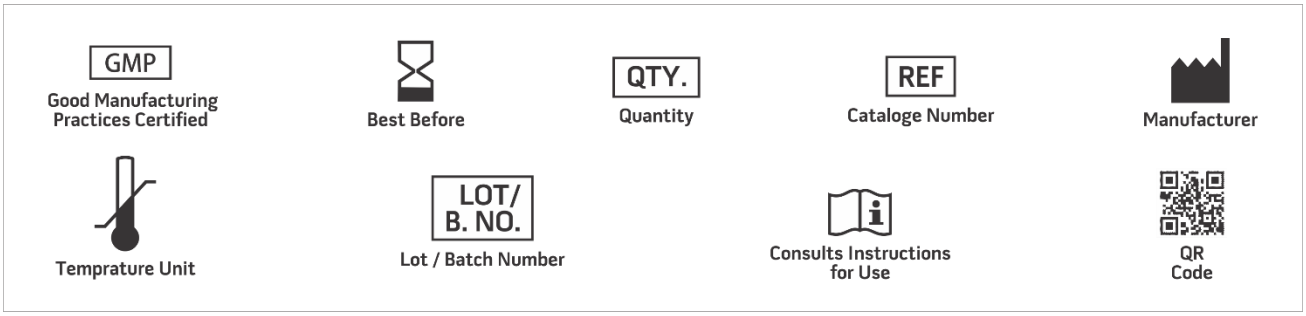
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Allen, 1952, Arch. Microbiol., 17:34.
2. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
3. Fitzgerald, 1962, Water and Sewage Works, 109:361.
4. Guiry M. D. and Blunden G., (Ed.), 1991, Seaweed Resources in Europe: Uses and Potential. John Wiley and Sons Ltd.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6. Lembi C. A. and Waaland J. R., (Ed.), Algae and Human Affairs, 1988, Cambridge University Press.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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