TM 835 – PRINGSHEIM'S MEDIUM

INTENDED USE

For cultivation of blue green bacteria.

PRODUCT SUMMARY AND EXPLANATION

Blue green algae are very important organisms for the health and growth of many plants. They are one of very few groups of organisms that can convert inert atmospheric nitrogen into an organic form, such as nitrate or ammonia. Blue green algae include a large number of widely distributed species. Inspite of their vigorous growth under natural conditions, only a few of these organisms have been cultured in artificial media. Pringsheims Medium is recommended for the cultivation of Blue Green Algae.

The blue-green algae contain a pigment known as phycocyacin in addition to chlorophyll which imparts a special blue green colour to these organisms. Some of the blue-green algae possess specialized cells known as heterocysts which are implicated in nitrogen fixation. The water logged rice soil provides an ideal environment for the growth of certain blue-green algae.

It is not easy to isolate pure cultures of algae since several species of algae are covered by mucilaginous matrix which harbours many contaminants. Serial dilutions of soil are made and 1 ml aliquots of each dilution transferred into suitable sterilized liquid medium either in flasks plugged with cotton wool or in bottles filled with sterilized white sand moistened with the algal medium. The flasks or bottles are kept for a few weeks near a source of light. Individual colonies are then transferred to agar slants for identification.

COMPOSITION

Ingredients	Gms / Ltr
Potassium nitrate	0.200
Magnesium sulphate	0.010
Ammonium hydrogen phosphate	0.020
Calcium chloride	0.005
Iron (II) chloride	0.0005

PRINCIPLE

This medium consists of Potassium nitrate and ammonium hydrogen phosphate which provide nitrogen source. Ferric chloride provides an iron source to blue green algae. Magnesium sulphate and the chloride salts are sources of ions that simulate metabolism.

INSTRUCTION FOR USE

- Dissolve 0.24 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : White to cream homogeneous free flowing powder.

Appearance of prepared medium : Colourless clear solution over a white precipitate.

INTERPRETATION

Cultural characteristics observed after incubation.

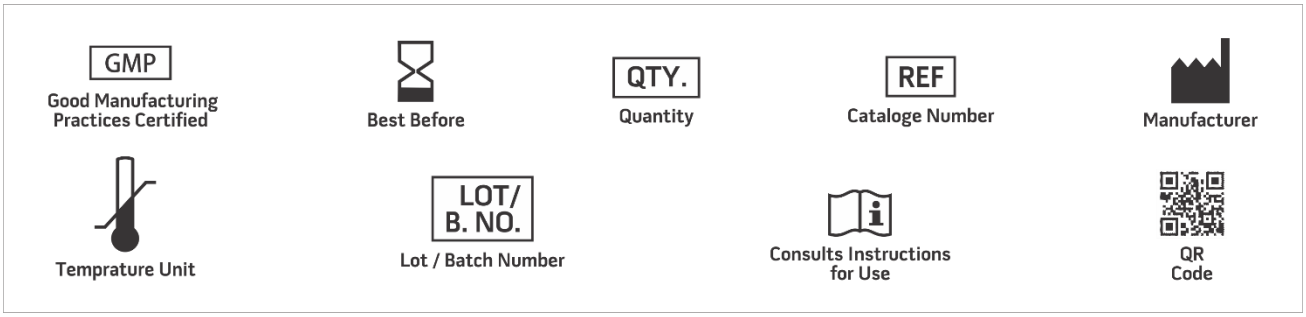
Microorganism	ATCC	Growth	Incubation Temperature	Incubation Period
Chlorella vulgaris	9765	Good-luxuriant	25-27°C	1 Week
Euglena gracilis	12716	Good-luxuriant	25-27°C	1 Week

PACKAGING:
In pack size of 100 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. Gerloff G. C., George P., Fitzgerald and Folke Song, The Mineral Nutrition of Coccohloris peniocystis., Am. J. of Botany, Vol. 37, No. 10, 1950, pg 835 840.
2. Pringsheim E. G., 1964, Pure cultures of Algae, Their Preparation and Maintenance, Hafner Publishing Co, New York and London.
3. Subba Rao N. S.,1977, Soil Microorganisms and Plant Growth, Oxford and IBH Publishing Company.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019