

Technical Information

Chlorella Broth Base w/o Dextrose and Citrate

Product Code: DM 1769

Application: - Chlorella Broth Base w/o Dextrose and Citrate is recommended for cultivation of *Chlorella* species.

Composition**

Ingredients	Gms / Litre
Cupric sulphate	0.0078
Sodium molybdate	0.050
Zinc sulphate	0.220
Boric acid	0.00028
Manganese sulphate	0.0014
Ferrous sulphate	0.0015
Potassium sulphate	0.217
Magnesium sulphate	2.400
Monopotassium phosphate	2.450
Potassium nitrate	2.500
Final pH (at 25°C)	4.5±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Chlorella is a genus of single-celled green algae, belonging to the phylum Chlorophyta. Chlorella Broth has originally modified by Shrift (1) and further modified for cultivation and maintenance of *Chlorella*.

All algae utilize inorganic phosphates and sulphates. There is a fairly high requirement of molybdate as a trace metal in nitrogen fixation. Calcium, magnesium, potassium and probably sodium are required by algae. Most algae grow poorly on agar and it is best to let them become established in liquid culture before adapting them to the more rigorous conditions of an agar slant.

Chlorella Broth Base w/o Dextrose and Citrate is the same as Chlorella Broth except that the citrate and dextrose have been omitted from the medium. This media supplies the necessary nutrients for the rapid growth of *Chlorella* species. *Chlorella* being photosynthetic green algae should be cultivated in the presence of light. Bright diffused light, fluorescent light and sunlight are satisfactory sources of light for the growth of *Chlorella*. The inoculated tubes/flasks should be incubated in the presence of light at 25-27°C for a week to permit good growth and pigmentation (2). *Chlorella* cultures can be maintained at room temperature for 2-3 months without subculturing.

Methodology

Suspend 7.6 grams of dehydrated media in 900 ml distilled water. Mix thoroughly & heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Add aseptically 100 ml of separately sterilized solution of 10 gm of dextrose and 32 mg of potassium citrate. Shake well and dispense as desired in tubes or flasks.

Quality Control

Appearance

White to cream homogeneous free flowing powder

Colour and Clarity

Colourless clear solution in tubes

Reaction

Reaction of 0.76% w/v aqueous solution at 25°C. pH : 4.5±0.2



Dehydrated Culture Media
Bases / Media Supplements

pH Range

4.30-4.70

Cultural Response

DM1769: Cultural characteristics observed in presence of light, after an incubation at 25-27°C for 1 week.

Organism**Growth**

Chlorella vulgaris ATCC 9765 good-luxuriant

Euglena gracilis ATCC 12716 good-luxuriant

Storage and Shelf Life

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

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Shrift, 1954, Am. J. Botany, 41:223.

2. Norris J.R. & Ribbons D.W. (ed.), 1963, Methods in Microbiology, Volume 3B, Academic press, London, pg. 269.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at CDH is true and accurate
- Central Drug House Pvt. Ltd. reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents. Do not use the products if it fails to meet specifications for identity and performances parameters.

