



Product Information Sheet

G3454 **f/2 Guillard's Marine Enriched** **Seawater w/o Silicate**

Synonym: f/2 w/o Si

Properties:

Form: Fine to Coarse Powder
Appearance: Cream to light yellow
Application: Marine phytoplankton culture
Solubility: Soluble in Seawater
Typical Working Concentration: 0.09 g/L
Storage Temp: 2-6°C
Storage Temp of Stock Solution: 2-6°C
Biological Assay: Biologically tested with *Dunaliella salina*

Formula (mg/L):

Sodium Nitrate	75.0	Sodium Phosphate, Monobasic	5.00
Cobalt Chloride•6H ₂ O	0.01	Zinc Sulfate•7H ₂ O	0.022
Cupric Sulfate•5H ₂ O	0.01	Biotin	0.0005
EDTA, disodium salt	4.36	Vitamin B12	0.0005
Ferric Chloride, Anhydrous	1.90	Thiamine HCl	0.10
Manganese Chloride•4H ₂ O	0.18		
Molybdic Acid, disodium salt	0.006		

Application Notes:

f/2 Guillard's Marine Enriched Seawater is a powder formulation of the vitamins, macro- and trace-element solutions to be dissolved in seawater (S7650). This formulation utilizes EDTA and Ferric Chloride in molar equivalents (NCMA, Guillard and Ryther 1962). This medium DOES NOT contain silicate, so it can be used to for axenic maintenance of NON-diatom marine phytoplankton.

Species documented to be grown in f/2 without silicate:
Symbiodinium (Mays & Kempf, 2014)

To make 1L of medium: Dissolve 0.10 g in 0.99L of seawater (S7650) and adjust the pH to the desired range using HCl or KOH. The original formulation, according to Guillard, used a pH of 7.2 +/- 0.1 (Guillard, 1962). Bring the final volume to 1.0L with seawater and autoclave the medium.

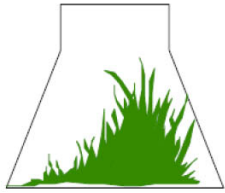
PhytoTechnology Laboratories®

P.O. Box 12205; Shawnee Mission, KS 66282-2205

Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442

Web Site: www.phytotechlab.com

© 2011 PhytoTechnology Laboratories®



Product Information Sheet

References:

- Guillard, R.R.L, and J.H. Ryther (1962) Studies of Marine Planktonic Diatoms: I. *Cyclotella nana* Hustedt, and *Detonula confervacea* (Cleve) Gran. *Canadian Journal of Microbiology* 8, 229-239.
- Mays, M.M. & Kempf, S. C. (2014). Antigenic variation in mucilage secreted by members of the genus *Symbiodinium* (Dinophyceae). *Journal of Phycology*, 50(5), 850-859.
- NCMA. Provasoli-Guillard, National Center for Marine Algae and Microbiota. Available:
<https://ncma.bigelow.org/node/79>

PhytoTechnology Laboratories®

P.O. Box 12205; Shawnee Mission, KS 66282-2205

Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442

Web Site: www.phytotechlab.com

© 2011 PhytoTechnology Laboratories®