

f/2Guillards Marine Enriched Solution (10X)

PL041

Composition :

Ingredients	milligrams/1000ml
Sodium nitrate	750.00
Sodium phosphate monobasic	50.00
Manganese chloride.4H ₂ O	1.80
Sodium molybdate	0.06
Ferric Chloride anyhdrous	31.50
EDTA disodium salt.2H ₂ O	43.60
Copper sulphate.5H ₂ O	0.10
Cobalt chloride.6H ₂ O	0.10
Zinc sulphate.7H ₂ O	0.22
Biotin	0.005
Vitamin B12	1.00
Thiamin HCl	0.005
TOTAL gm/1000ml	0.878

Directions :

Measure out approximately 600ml of distilled water. While stirring add 100ml of basal stock solution. Rinse the original bottle with a small volume of distilled water to remove traces of the solution. Add desired heat stable supplements prior to autoclaving. Adjust the medium to the desired pH using 1N HCl/1N NaOH. Make up the final volume to 1000ml with distilled water. Sterilize the medium by autoclaving at 15 lbs or 121°C for 15 minutes. Cool the autoclaved medium to 45°C before adding the filter sterilized heat labile supplements. Dispense the desired amount of medium in sterile culture vessels.

Principle and Interpretation :

f/2 Guillards Marine Enriched Solution (10X) is a filter sterilized liquid. Recommended for the in vitro cultivation of fresh water algae.

Quality Control:

Appearance : Colourless to yellow, clear solution.
 Sterility : No bacterial or fungal growth is observed after 14 days of incubation, as per USP specification.

Cultural Response:

Cultural condition :

- Incubation period : 8 weeks
- Temperature : 24°C ±1.0°C
- Photoperiod (D: N) in hours : 24.0

Cell Line	Type of Culture	Results
<i>Chlorella</i> species	Suspension culture	Actively growing cells, No toxicity to cells
<i>Nostoc</i> species	Suspension culture	Actively growing cells, No toxicity to cells

[The medium is prepared as per direction. The growth promoting activity of this basal salt solution is evaluated using two algal species viz. *Chlorella* species and *Nostoc* species through three passages.]

Storage and shelf life :

Store the basal stock solution at 2-8°C away from direct light. If possible, the entire content of each bottle should be used immediately aseptically after opening or else the unused portion should be stored at the given temperature. Avoid contaminating the liquid. Use before the expiry date.

Note :

Any drift in the pH of the medium may result in precipitation of certain media constituents. We recommend checking and adjustment of pH before autoclaving. Slight particulate matter may be visible due to the inherent property of inorganic salts to precipitate in mixture. However, this doesn't affect the in vitro growth and development of algae cultures.

Reference :

Guillard, R.R.L. 1975. Culture of phytoplankton for feeding marine invertebrates. pp 26-60. In Smith W.L. and Chanley M.H (Eds.) *Culture of Marine Invertebrate Animals*. Plenum Press, New York, USA.

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