

Artificial Seawater Nutrient Medium (III)

PT153

Composition :

Ingredients	milligrams/litre
Sodium chloride	25000.00
Magnesium sulphate	3500.00
Sodium nitrate	750.00
Potassium phosphate dibasic	26.30
Magnesium chloride.6H ₂ O	2000.00
Calcium chloride.2H ₂ O	500.00
Potassium chloride	500.00
Sodium carbonate	20.00
Citric acid	3.00
Ferric ammonium citrate	3.00
Magnesium EDTA	0.50
Cyanocobalamin (Vitamin B ₁₂)	0.01
Boric acid	2.86
Manganese chloride.4H ₂ O	1.81
Sodium molybdate.2H ₂ O	0.252
Zinc sulphate.7H ₂ O	0.222
Copper sulphate.7H ₂ O	0.079

Directions :

Suspend 32.31 grams (the equivalent weight of dehydrated medium per litre) in 600 ml of distilled water. Rinse media vial with small quantity of distilled water to remove traces of powder if any. Dissolve the medium completely by gentle stirring. Add other heat stable plant nutrients as required prior to autoclaving. Adjust the desired pH using 1N HCl/NaOH. Make up the final volume to 1000 ml with distilled water. Mix well and sterilize by autoclaving at 15 lbs (121°C) for 15 minutes. Cool the medium to 45°C. Aseptically add any desired filter sterile growth nutrients if required. Mix well and aseptically dispense desired quantity in sterile culture vessels.

Principle and Interpretation :

Artificial seawater nutrient medium (III) has been specially formulated for the *in vitro* cultivation of sea water algae.

Quality Control :

Appearance	: White to off-white, homogeneous, free flowing powder.
Solubility	: 32.31gm/litre soluble in distilled water.
Colour and Clarity	: colourless to light yellow, clear solution.
pH at 25°C	: 6.8±0.5 of 3.231% w/v dehydrated medium.

Cultural Response:

Cultural condition :

· Incubation period	: 8 weeks
· Temperature	: 25°C ±1.0°C
· Photoperiod (D: N) in hours	: 24:0

Cell Line	Type of Culture	Results
<i>Phormidium</i> species	Suspension culture	Actively growing cells, No toxicity to cells
<i>Lyngbya</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. *Phormidium* species and *Lyngbya* species through three passages.]

Storage & Shelf life :

Dehydrated plant tissue culture media powder is extremely hygroscopic and should be protected from atmospheric moisture. If possible, the entire content of each bottle should be used immediately after opening or else the unused portion should be stored in a desiccator and refrigerated at 2-8°C. Use before the expiry date.

Disclaimer :

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