
Product Name : F/2 Broth

Medium for growing coastal marine algae, especially diatoms.

FORMULA (G/L)

Sodium Nitrate.....0.075
Monosodium Phosphate.....0.005
Sodium Silicate.....0.03

DIRECTIONS

Suspend 0.11 G of powder in 950 mL of filtered natural seawater. Add 2 vials of F/2 Trace Metal Solution (MB-F0766) and add 2 vials of F/2 Vitamin Solution (MB-F0767). Bring the final volume to 1 L with filtered natural seawater. Sterilize in autoclave at 121°C for 15 minutes. Dispense into final containers.

F/2 Trace Metal Solution

1 Vial contents (each vial is sufficient for 500 mL of medium)

Iron (III) Chloride Hexahydrate.....1.575 mg
Ethylenediaminetetraacetic Acid Disodium Salt Dihydrate.....2.18 mg
Copper (II) Sulfate Pentahydrate.....4.9 µg
Sodium Molybdate Dihydrate.....3.15 µg
Zinc Sulfate Heptahydrate.....11.0 µg
Cobalt (II) Chloride Hexahydrate.....5.0 µg
Manganese (II) Chloride Tetrahydrate.....90.0 µg

F/2 Vitamin Solution

1 Vial contents (each vial is sufficient for 500 mL of medium)

Thiamine HCl.....50.0 µg
Biotin.....0.25 µg
Cyanocobalamin.....0.25 µg

DESCRIPTION

F/2 Broth is common and widely used general enriched seawater medium designed for growing coastal marine algae, especially diatoms. The concentration of the original formulation, termed "F Broth" (Guillard and Ryther 1962), has been reduced by half.

TECHNIQUE

Inoculate the broth with specimen on a swab. Incubate at 17 ± 1°C for 3 - 5 days or up to 7 days.

QUALITY CONTROL

Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: white.

Prepared medium

Appearance: slightly opalescent.

Color: colorless.

Incubation conditions: 17 ± 1 °C / 3 -5 days or up to 7 days.

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Microorganism	ATCC	Growth
<i>Skeletonema costatum</i>		good
<i>Thalassiosira pseudonana</i>		good

STORAGE

The powder is very hygroscopic: store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared medium at 2-6°C.

REFERENCES

1. 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.
2. Guillard, R.R.L. and Ryther, J.H. 1962. Studies of marine planktonic diatoms. I. *Cyclotella nana* Hustedt and *Detonula confervacea* Cleve. Can. J. Microbiol. 8: 229-239.

PACKAGING

Cat. No : MB-F0701 F/2 Broth	500 G
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