Microorganisms



997. HNW MEDIUM

NaNO ₃	1.000	g
NaHCO ₃	1.000	g
$Na_2WO_4 \times 2 H_2O$	0.100	mg
Na_2S	0.500	g
Trace vitamin solution (see medium 141)	10.000	ml
DMJ synthetic seawater (see below)	1000.000	ml

To prepare the medium, all compounds of DMJ seawater were dissolved in 1 liter of distilled deionized water, and the pH was adjusted to around 7.0 with NaOH at room temperature prior to autoclaving. After autoclaving, filter-sterilized NaNO $_3$ solution (100 g/l), NaHCO $_3$ solution (100 g/l), Na $_2$ S solution (100 g/l); pH 7.5) and trace vitamin solution were added. Then the tubes were tightly sealed with butyl rubber stoppers under a gas phase of 80% H $_2$ + 20% CO $_2$ (300 kPa).

Synthetic seawater: NaCl K_2HPO_4 $CaCl_2 \times 2 H_2O$ NH_4Cl $MgSO_4 \times 7 H_2O$ $MgCl_2 \times 6 H_2O$ KCl $NiCl_2 \times 6 H_2O$ $Na_2SeO_3 \times 5 H_2O$ $Fe(NH_4)_2(SO_4)_2 \times 6 H_2O$ Trace mineral solution (see below)	30.000 0.140 0.140 0.250 3.400 4.180 0.330 0.500 0.500 0.010 10.000	g g g g g mg mg mg
Trace mineral solution: $C_6H_9NO_6$ $MgSO_4 \times 7 H_2O$ $MnSO_4 \times 2 H_2O$ $NaCl$ $FeSO_4 \times 7 H_2O$ $CoSO_4 \times 7 H_2O$ $CaCl_2 \times 2 H_2O$ $ZnSO_4 \times 7 H_2O$ $CuSO_4 \times 7 H_2O$ $CuSO_4 \times 7 H_2O$ $CuSO_4 \times 7 H_2O$ $CuSO_4 \times 5 H_2O$ $CuSO_4 \times 5 H_2O$ $CuSO_4 \times 5 H_2O$ $CuSO_4 \times 6 H_2O$ $CuSO_4 \times 7 H_2O$ Cu	1.500 3.000 0.500 1.000 0.100 0.180 0.100 0.180 0.010 0.020 0.010 0.025 0.300	g g g g g g g g mg