Supplemental Table 1: Aquil Medium

Aquil Medium	
substance	Initial weight
NaCl	24.36 g
$MgCl_2 \cdot 6H_2O$	11.03 g
KCl	0.7 g
Na_2SO_4	4.09 g
$CaCl_2 \cdot 2H_2O$	1.0 g
$NaNO_3$	8.5 mg
$NaH_2PO_4 \cdot H_2O$	0.5 mg
$NaHCO_3$	0.2 g
KBr	10.0 mg
NaF	3.0 mg
$Na_2EDTA \cdot 2H_2O$	5 mg
PIV micronutrients solution	0.5 ml
ddH_2O	1.0 L

PIV micronutrients solution	
substance	Initial weight
Na_2EDTA	0.750 g
$MnCl_2 \cdot 4H_2O$	0.041 g
ZnCl	0.005 g
$NaMoO_4 \cdot 2H_2O$	0.004 g
$CoCl_2 \cdot 6H_2O$	0.002 g
$FeCl_3 \cdot 6H_2O$	0.097 g
ddH_2O	1.0 L

Supplemental Table 2: Cell density (cell *10^5 mL^{-1}) of *Thalassiosira pseudonana* during 3-day (n = 3)

	20°C		25°C	
Cu (nM)	Day 0	Day3	Day 0	Day3
	3.74	6.912	2.486	15.71
0	3.68	5.62	3.079	15.31
	3.68	5.936	2.793	15.37
	3.504	9.306	1.779	14.81
19.6	4.46	9.442	2.378	16.34
	3.731	8.758	2.909	15.22
	4.009	9.652	2.229	14.46
160	3.805	10.73	1.917	15.63
	3.882	10.44	2.538	15.47
	3.862	7.857	2.621	17.06
800	3.264	8.55	2.202	15.17
	3.567	8.236	2.163	13.34
	3.274	6.578	2.393	16.88
8000	3.134	6.196	2.587	16.31
	3.23	6.42	2.383	17.46

Supplemental Table 3: Significance test results of growth rate, Chla, Chlc, Caro, Fv/Fm, yield, NPQ, Cu concentrations, POC: Chla for effects among Temperature and Cu concentrations after 3-day based on the 2-way ANOVA (MANOVA, LSD tests). The limit of significance was set at 95%

Source of variation	Temperature	Cu	T & Cu	Temperature	Cu	T & Cu
		F			*P*	
Growth rate	145.828	4.309	0.886	0.000	0.011	0.490
Chla (pg/cell)	33.066	3.715	1.427	0.000	0.020	0.262
Chlc (pg/cell)	65.17	1.46	3.22	0.000	0.252	0.034
Caro (pg/cell)	246.137	2.046	2.349	0.000	0.126	0.089
Fv/Fm	168.7	13.056	9.044	0.000	0.000	0.000
yield	35.750	6.379	3.695	0.000	0.002	0.021
NPQ	0.244	9.773	1.561	0627	0.000	0.223
Cu (fg/cell)	11.604	33.988	2.198	0.003	0.000	0.106
POC: Chla	8.128	9.480	0.665	0.010	0.000	0.624