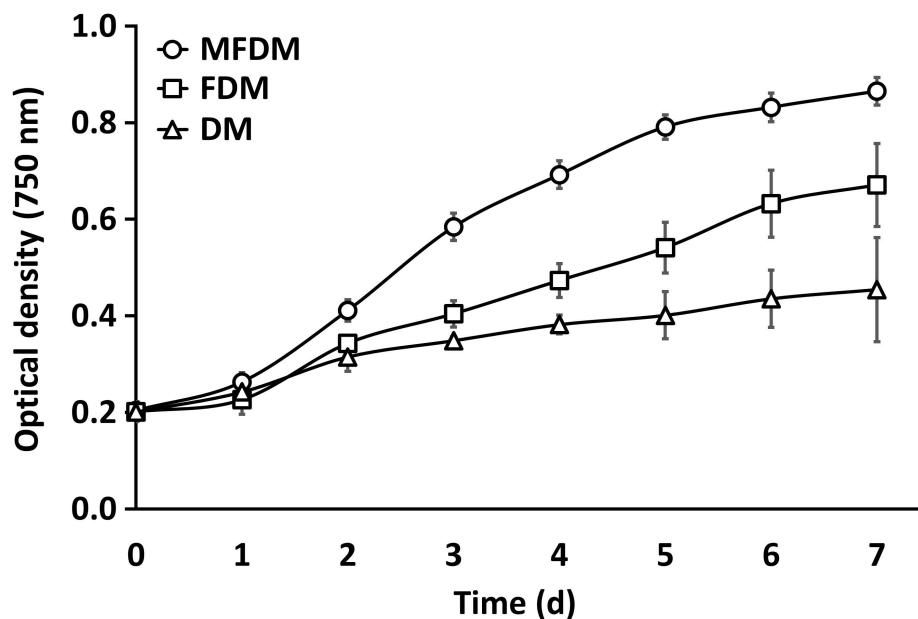


**Supplementary Table S2.** Comparison of nutrient composition between standard freshwater diatom media and modified FDM media

Element	DM	Concentration (mM)	MFDM	Concentration (mM)
N	Ca(NO <sub>3</sub> ) <sub>2</sub> ·4H <sub>2</sub> O	0.170	NaNO <sub>3</sub>	5
Si	K <sub>2</sub> SiO <sub>3</sub>	0.228	Na <sub>2</sub> SiO <sub>3</sub>	5.33
P	Na <sub>2</sub> HPO <sub>4</sub> ·12H <sub>2</sub> O	0.101	K <sub>2</sub> HPO <sub>4</sub>	0.33
C	NaHCO <sub>3</sub>	0.189	NaHCO <sub>3</sub>	10
Ca	Ca(NO <sub>3</sub> ) <sub>2</sub> ·4H <sub>2</sub> O	0.085	CaCl <sub>2</sub> ·2H <sub>2</sub> O	0.25
Mg	MgSO <sub>4</sub> ·7H <sub>2</sub> O	0.1	MgSO <sub>2</sub> ·7H <sub>2</sub> O	1
S	MgSO <sub>4</sub> ·7H <sub>2</sub> O	0.1	MgSO <sub>2</sub> ·7H <sub>2</sub> O	1
K	K <sub>2</sub> SiO <sub>3</sub>	0.456	K <sub>2</sub> HPO <sub>4</sub>	0.66
B	H <sub>3</sub> BO <sub>3</sub>	0.04	H <sub>3</sub> BO <sub>3</sub>	0.01

Na and Cl: not mentioned.

FDM, freshwater media; DM, diatom media; MFDM, modified FDM.



**Supplementary Fig. S1.** Growth curve of *Nitzschia palea* HY1 in various types of media such as diatom medium (DM, triangle), freshwater medium (FDM, square), and modified freshwater medium (MFDM, circle). All data represent means with standard deviations from at least three independent experiments.