



**S6 Fig. DIN variations and  $\delta^{15}\text{N}$  changes in *Saccharina japonica* var. *religiosa* in fertilization and non-fertilization in relation to incubation periods.** In incubation experiments, one block (30×30×30 cm) was fertilized in a panlite tank and seawater adjusted to 15 °C added at a rate of 200 L day<sup>-1</sup>. DIN concentrations in sea water using a panlite tank and  $\delta^{15}\text{N}$  changes in *Saccharina japonica* var. *religiosa* were determined.