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**Figure S1.** Carbonate system over the course of the copepod growth experiment.

**A)** Dissolved inorganic carbon (DIC) within CO2 treatments during experimental growth phase of the copepods with a standard deviation of 47-91 µmol kg-1 within replicates of each treatment combination. On the first and the last day, all treatments were well separated with some overlap on days 8 and 9. In the high CO2 treatment (ZH/PH), incubation bottle 740-4 displayed maximum deviation of DIC with 130-210 µmol kg-1 relative to the other treatment replicates. **B)** Mean pH values during experimental growth phase of the copepods were well separated between the two main CO2 seawater treatments 8.14 and 7.94 in the ZH and ZL treatment, respectively, with standard deviations ranging from 0.08 to 0.12. **C)** Calculated mean CO2 values in ZL and ZH were 460 and 755 µatm, respectively, with a standard deviation of 3-57 µatm between replicates during the first feeding period with *Rhodomona salinas*. From day 8 on, after the food algae was changed from *R. salinas* to *Thalassiosira* ***pseudonana***, the standard deviations of the mean CO2 values in all treatment combinations were higher, ranging from 20 to 232 µatm. The CO2 concentrations of the mixed treatment combinations ZL/PH and ZH/PL were closer to the CO2 target levels with 454 and 823 µatm, respectively. Error bars indicate standard deviations.