

The effect of ocean acidification on metabolic rate (oxygen consumption) of the blue mussel *Mytilus edulis* in Penobscot Bay, Maine

Increasing CO₂ concentrations in today's oceans are causing a decrease in pH that may harm aquatic organisms. Physiological processes such as calcification, growth rate, and metabolic rate of the blue mussel, *Mytilus edulis*, are affected by decreases in pH. To determine the effects of decreased pH on the metabolic rate and shell weight of *M. edulis*, a study was conducted where mussels were exposed to an acidic environment and their metabolic rates measured by respirometry. There was no significant difference in metabolic rate from week one to week five when exposed to a decreased pH of 7.5. Metabolic rate between the control measurements and the experimental measurements at the conclusion of the 5-week study also had no significant difference. Shell weight did not differ between the two treatment groups. Significant results were not seen within the duration of this experiment. My results contrasted with what is found in the literature and there could be different factors that affected these results in my study.