Oil is a common water pollutant that is released into the environment through spills which can harm marine ecosystems. As oil spreads out over the water surface, the diffusion of CO₂—which is required by *Chlamydomonas reinhardtii* for photosynthesis—becomes inhibited. This experiment investigated the effect of mineral oil on the CO₂ concentration of *C. reinhardtii*'s environment. We performed titrations on samples of *C. reinhardtii* that we treated with mineral oil to find the concentration of CO₂. The control group had the greatest change in CO₂ concentration over time, while the full oil treatment had the lowest. The mean CO₂ concentrations were 77.83 ppm for the control group, 53.67 ppm for the partial treatment, 49.08 ppm the half treatment, and 44.42 ppm for the full treatment. A two-way ANOVA revealed our results to be statistically significant for both time (p=2.9 x 10⁻⁴), treatment (p=6.0 x 10⁻⁵) and the interaction between the two (2.2 x 10⁻¹⁶); thus, we all three null hypotheses. It is possible that the metabolic rates of *C. reinhardtii* were reduced due to the toxicity of aromatic hydrocarbons found in oil, although there was some growth over the 7-day period of the experiment.

Themes:

Check (highlight) the most applicable theme according to the abstract.

| Innovation and Technology | Health and Wellness | Culture and Society | Sustainability and Conservation |

Comments: Overall well-presented in a simple, easy-to-follow manner with good flow. Please amend the symbols in the text. Best at MURC!