



The response of *Emiliana huxleyi* to P-limitation: a comparison of Eastern- and Western Mediterranean strains

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The phosphate concentrations in the oligotrophic Eastern Mediterranean Sea are typically sub-nanomolar and therewith on average much lower than in the Western Mediterranean. Phytoplankton in the Eastern Mediterranean is potentially phosphorus-limited all year round. This renders the latter oceanic region unique with respect to nutrient supply. In the context of climate change it is expected that increased stratification will lead to diminished nutrient supply from deep waters and hence increase the probability of nutrient limitation for phytoplankton. It was the objective of this study to test the hypothesis that Eastern Mediterranean strains of *E. huxleyi* respond differently to P-limitation than strains from the Western Mediterranean. Three Western and three Eastern strains of *E. huxleyi* were grown in batch culture under P-limitation. Growth rate, particulate organic phosphorus production, particulate organic carbon production, C37 alkenone production, and UK'37 were determined.