

Assessment of Microbial Community Composition Changes in the Presence of Phytoplankton-Derived Exudates in Two Contrasting Areas from Chilean Patagonia

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Supplementary information

Nutrient dynamic in response to PDE addition

PDE enrichment and control experiments resulted in nutrient changes through time (Figure 1). Experiments carried out with marine (station 5) surface picoplankton communities of different size fractions 1.6 and 0.7 μm resulted in a 4-fold increase in nitrate, a 1.4-fold increase in phosphate and no changes in silicic acid with the addition PDE (Figure 1A, 1B and 1C). However, these differences were not significant for both nutrients (t-test, $p>0.3$ and $p>0.4$, respectively). No significant changes in silicic acid concentrations through time were observed at any treatment done in marine station 5 (Figure 1B). At estuarine station 14, nitrate concentration remained close to zero for control treatment (without PDE addition) during all incubation time, and increased significantly after PDE amendments, while remaining relatively constant through time in both size fractions (t-test, $p<0.0001$; Figure 3D). No significant differences were observed for silicate between controls and PDE addition treatment (t-test, $p=0.2$) and non-significant differences were observed for phosphate concentrations (t-test, $p=0.06$), although treatment with PDE addition were slightly higher than controls through the time (except at the initial time for 0.7 μm treatment; Figure 1E and F).

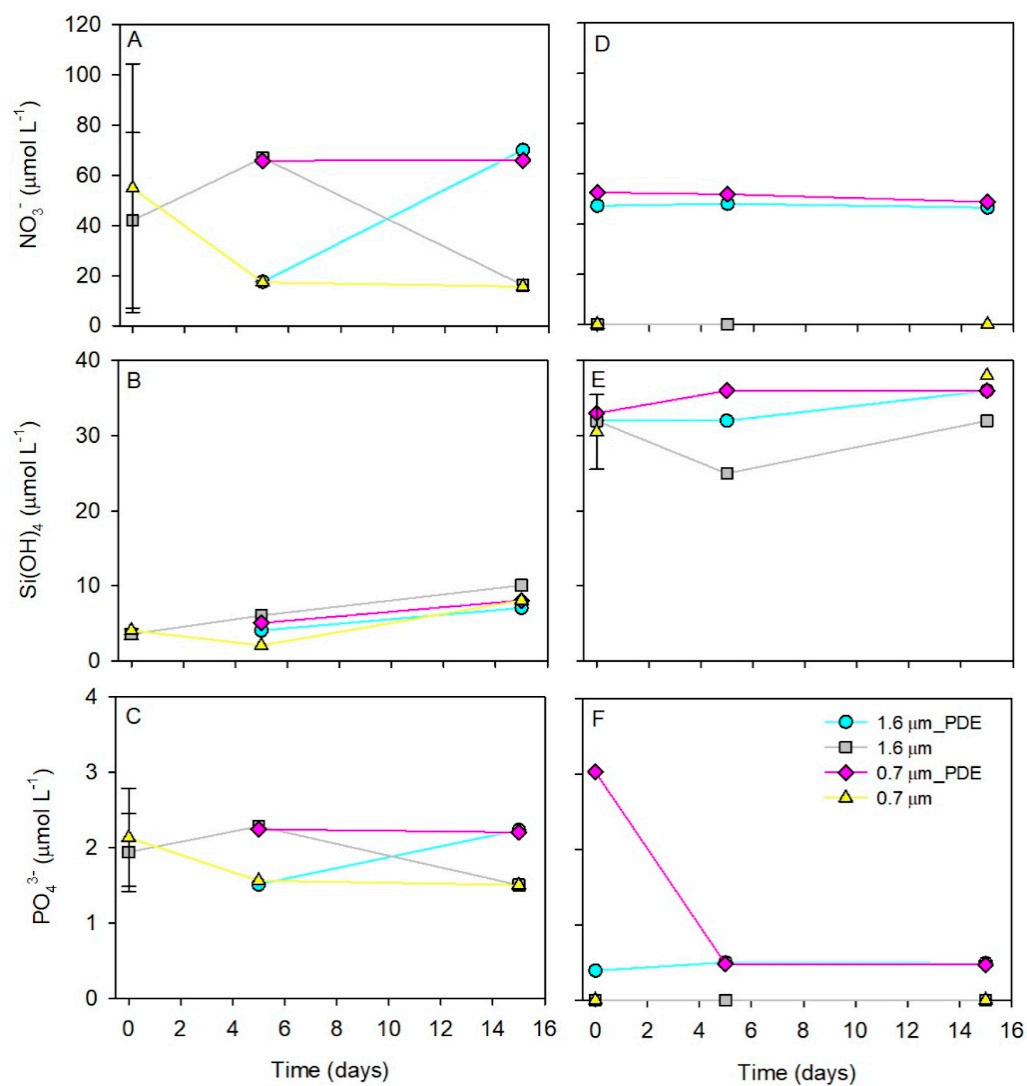


Figure S1. Nitrate ($\mu\text{mol L}^{-1}$; A-D), silicate ($\mu\text{mol L}^{-1}$; B-E) and phosphate concentration ($\mu\text{mol L}^{-1}$; C-F) from different sizes of natural bacterial assemblages (0.7 μm and 1.6 μm), with PDE addition and control for both stations. Left panel corresponds to marine station 5 and the right panel to estuarine station 14.

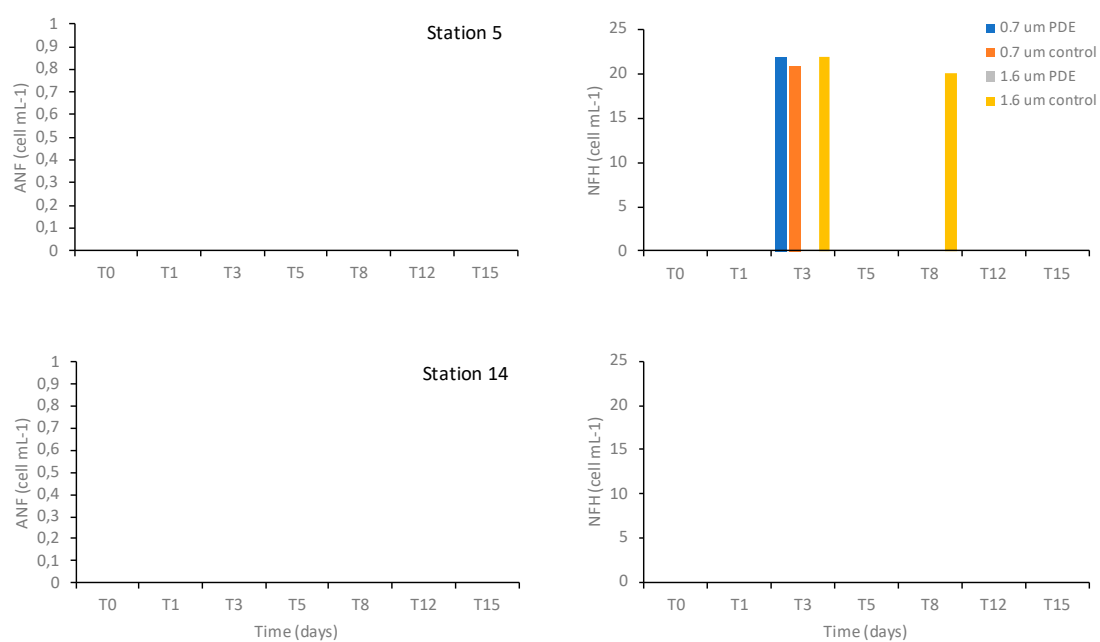


Figure S2. Autotrophic (ANF) and heterotopic nanoflagellates (HNF) abundance during the incubation time for the different sizes of natural bacterial assemblages (0.7 μ m and 1.6 μ m), with PDE additions and control for both stations.