The following appendix accompanies the article

Microbial dynamics in autotrophic and heterotrophic seawater mesocosms. III. Organic matter fluxes

Hans-Peter Grossart[1,*], Anja Engel[2], Carol Arnosti[3], Christina L. De La Rocha[2], Alison E. Murray[4], Uta Passow[2]

[1]**Institute of Freshwater Ecology and Inland Fisheries, Dept. of Limnology of Stratified Lakes, Alte Fischerhütte 2, 16775 Stechlin, Germany**

[2]**Alfred-Wegner-Institut für Polar- und Meeresforschung, Am Handelshafen 12, 27570 Bremerhaven, Germany**

[3]**Department of Marine Sciences, University of North Carolina, Chapel Hill, North Carolina 27599-3300, USA**

[4]**Division of Earth and Ecosystem Science, Desert Research Institute, 2215 Raggio Parkway, Reno, Nevada 89512, USA**

Email: hgrossart@igb-berlin.de

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Appendix 1. Mol% composition of neutral carbohydrates and amino acids

Mol% composition of neutral carbohydrates

Mol% composition of DFCHO in samples after Day 4 was largely dominated by glucose and rhamnose, which together accounted for >85% of the total DFCHO in all mesocosms. However, Diatom samples after Day 4 were characterized by lower mol% of glucose compared to those of the No Addition and *Phaeocystis* tanks.

Although galactose and glucose dominated DCCHO as well, their mol% composition was highly variable over time and between mesocosms. In the No Addition tank, glucose varied between 39 and 60% of DCCHO, and in the *Phaeocystis* tank it was highly variable, ranging between 20 and 70% of DCCHO. In the *Phaeocystis* tank, mol% of glucose was highest on Day 10 and lowest on Day 18. Glucose in the Diatom tank decreased from 50% of DCCHO on Day 1 to <30% on Days 10 to 14, but increased again to almost 50% by the end of the experiment. Mannose, galactose, and fructose each varied between 9 and 25% in the No Addition tank and between 5 and 30% in the *Phaeocystis* tank. In the Diatom tank, galactose and mannose each contributed to 10–25% of DCCHO. Rhamnose, arabinose, and fucose were of minor importance (each <10% of DCCHO).

Mol% composition of amino acids

Mol% composition of DFAA greatly differed between the mesocosms and with time (Fig. A1). In the No Addition tank, serine (45%) was the most dominant DFAA at the beginning of the experiment. By the end of the experiment, the contribution of serine had dropped to <15% (Fig. A1). In contrast, glutamine/glutamate accounted for ca. 10% at the beginning of the experiment, but increased to 62% on Day 16. In the *Phaeocystis* tank, there was a significant increase in alanine from ca. 10% at the beginning of the experiment to almost 90% on Day 20. The mol% of all other DFAA decreased towards the end of the experiment (Fig. A1). DFAA mol% composition in the Diatom tank was highly variable. Similarly to the No Addition tank, serine decreased from 35 to ca. 10% and glutamate was also highly variable, ranging between >10 and <50% (Fig. A1).

Mol% composition of DCAA was almost the same for all mesocosms and time points. Glutamine/glutamate, asparagine/aspartate, and serine usually accounted for >40% of DCAA. Glutamine/glutamate, asparagine/aspartate, and serine were also the most prominent amino acids of PCAA (ca. 60% in the No Addition tank, ca. 40% in the *Phaeocystis* tank, and from 42 to 60% in the Diatom tank).

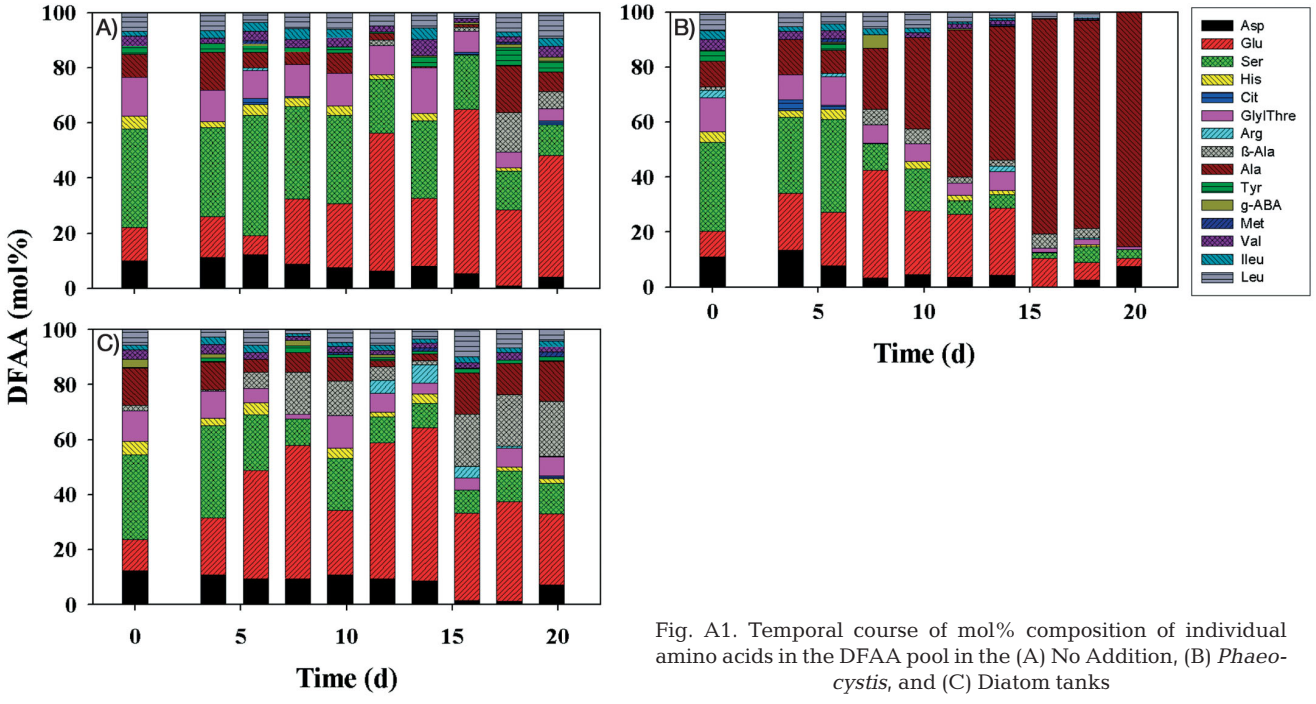

Fig. A1. Temporal course of mol% composition of individual amino acids in the DFAA pool in the (A) No Addition, (B) *Phaeocystis*, and (C) Diatom tanks