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Dimethylsulfoniopropionate (DMSP) cell quota of key Southern North Sea spring diatoms and Phaeocystis globosa.

Gaëlle Speeckaert (1,2), Nathalie Gypens (1), Christiane Lancelot (1), and Alberto V Borges (2)

(1) Ecologie des Systèmes aquatiques, Université Libre de Bruxelles, Brussels, Belgium, (2) Unité d'Océanographie Chimique, Université de Liège, Liège, Belgium

Dimethylsulfide (DMS) in the ocean results of complex transformations of dimethylsulfoniopropionate (DMSP) produced by phytoplankton under different controls, including microbial transformation pathways. The phytoplankton composition is an important factor of variability due to the species dependence of the DMSP production and conversion to DMS. To better appraise the link between phytoplankton diversity and the DMS(P) cycling in the Southern North Sea we present measurements of the DMSP cell quota of key spring phytoplankton species (Skeletonema costatum, Thalassiosira rotula, Rhizosolenia delicatula, Asterionella glacialis, Nitzschia closterium, Chaetoceros debilis, Chaetoceros socialis and Phaeocystis globosa) isolated from the North Sea and maintained in non-limiting and axenic laboratory culture conditions. Results are discussed with regards to literature data and hypothesis currently used in DMS(P) biogeochemical models.