

## **THE DEVELOPMENT OF PHYTOPLANKTON IN THE SEWAGE-POLLUTED SEAWATER TAKEN IN OOSTENDE PORT (BELGIUM) WHEN DILUTED WITH SYNTHETIC SEAWATER AT DIFFERENT LEVELS AS DERIVED FROM THE RESULT OF THE PIGMENT ANALYSIS**

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This study investigates the development of phytoplankton in brackish seawater at different levels of sewage pollution. The sewage polluted seawater taken in Oostende port Belgium (on 18 March 2002) was diluted with synthesis seawater at the same salinity (14SPU) in the four tanks (T1, T2, T3 and T4). The levels of the sewage-polluted seawater in the tanks were 100, 60, 30 and 10% corresponding. The tanks were kept at room temperature (20°C), under cool white light frames (200Wm<sup>-2</sup>) put on 12hrd<sup>-1</sup>. The phytoplankton composition as derived from the pigment analysis shows that in the sewage-polluted seawater Bacillariophyta was the dominant class; Raphidophyceae, Euglenophyta, Cyanophyta were less represented; Rhodophyta were very poorly represented. At all levels of the dilution, Raphidophyceae became dominant on Day 7 and Bacillariophyta became dominant again on Day 15. Cryptophyta developed in the high-level sewage-polluted seawater tanks (T1, T2, and T3) on Day 7, Day 15 and Dinophyta also developed in the same tanks on Day 15. In the tank with the low-level of sewage-polluted seawater (T4) only two phytoplankton classes were represented: Raphidophyceae and Bacillariophyta. As a case study, this presentation highlights the change of phytoplankton composition at high levels of sewage pollution with a possible occurrence of harmful and toxic species of phytoplankton; it also demonstrates that the use of pigments is a powerful tool for phytoplankton composition analysis.