Supplementary information for

Flow cytometric fingerprinting to assess the microbial community response to changing water quality and additives

Benjamin Buysschaert[a,b], Jorien Favere[a], Lotte Vermijs[a], Valerie Baetens[a], Agathi Naka[a], Nico Boon[a], Bart De Gusseme*[a,b]

[a] Center for Microbial Ecology and Technology (CMET), Department of Biochemical and Microbial Technology, Ghent University, Coupure Links 653, B-9000 Gent, Belgium

[b] FARYS | TMVW, Stropstraat 1, B-9000 Gent, Belgium

* Correspondence to: Bart De Gusseme, Ghent University; Faculty of Bioscience Engineering; Centre of Microbial Ecology and Technology (CMET); Coupure Links 653; B-9000 Gent, Belgium; phone: +32 (0)9 264 59 76; fax: +32 (0)9 264 62 48; E-mail: Bart.DeGusseme@UGent.be; Webpage: www.cmet.UGent.be.

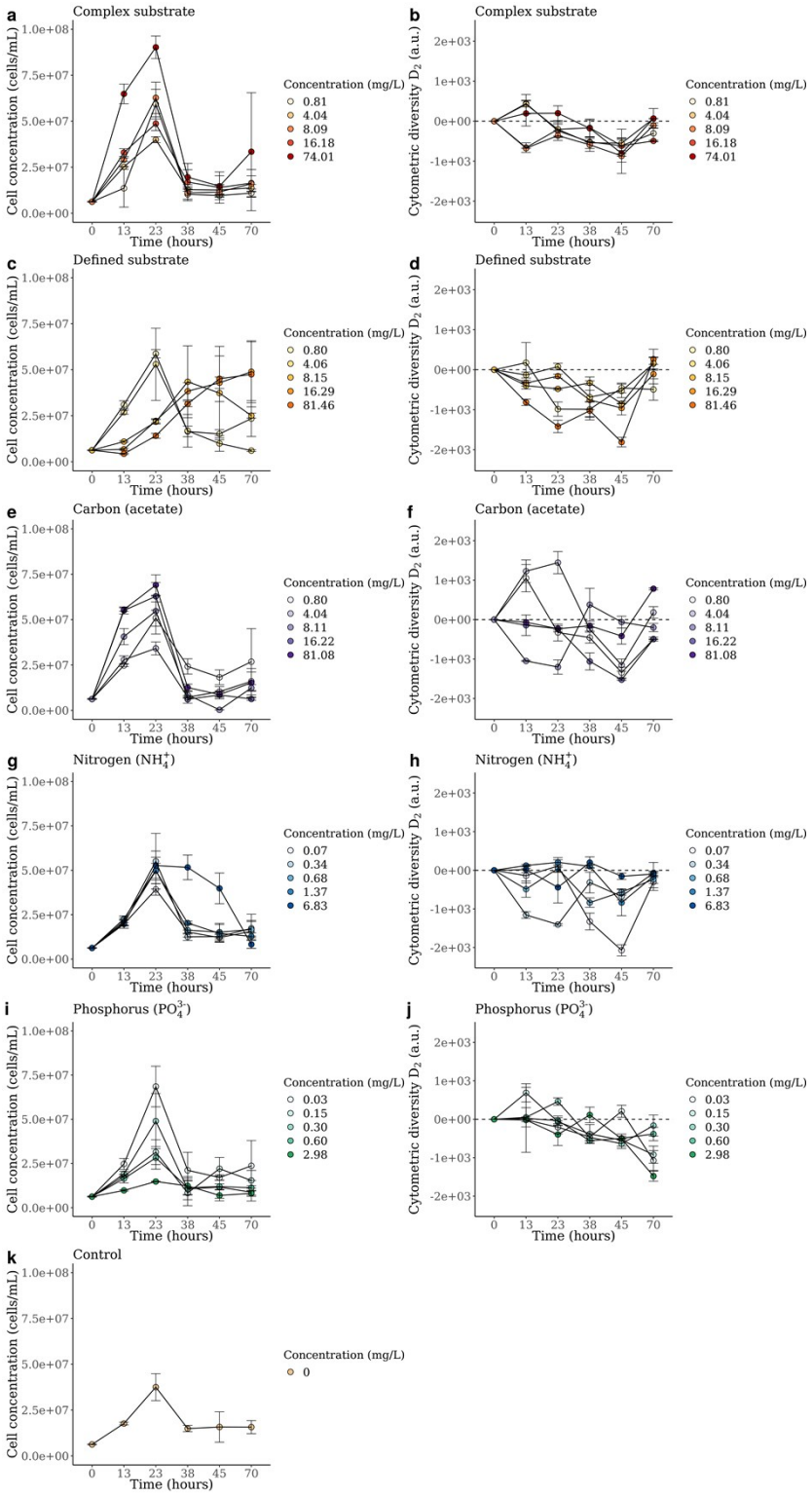

Figure S1: Average cell concentration (cells/mL)(**a**, **c**, **e**, **g**, **i**, and **k**) and average flow cytometric indices D_2 (**b**, **d**, **f**, **h**, and **j**) of surface water, with their respective standard deviation in function of time for each substrate and concentration (n=3). The cytometric diversity indices were normalized by subtracting the cytometric diversity indices of the blank samples. The dashed line represents the blank samples as reference.

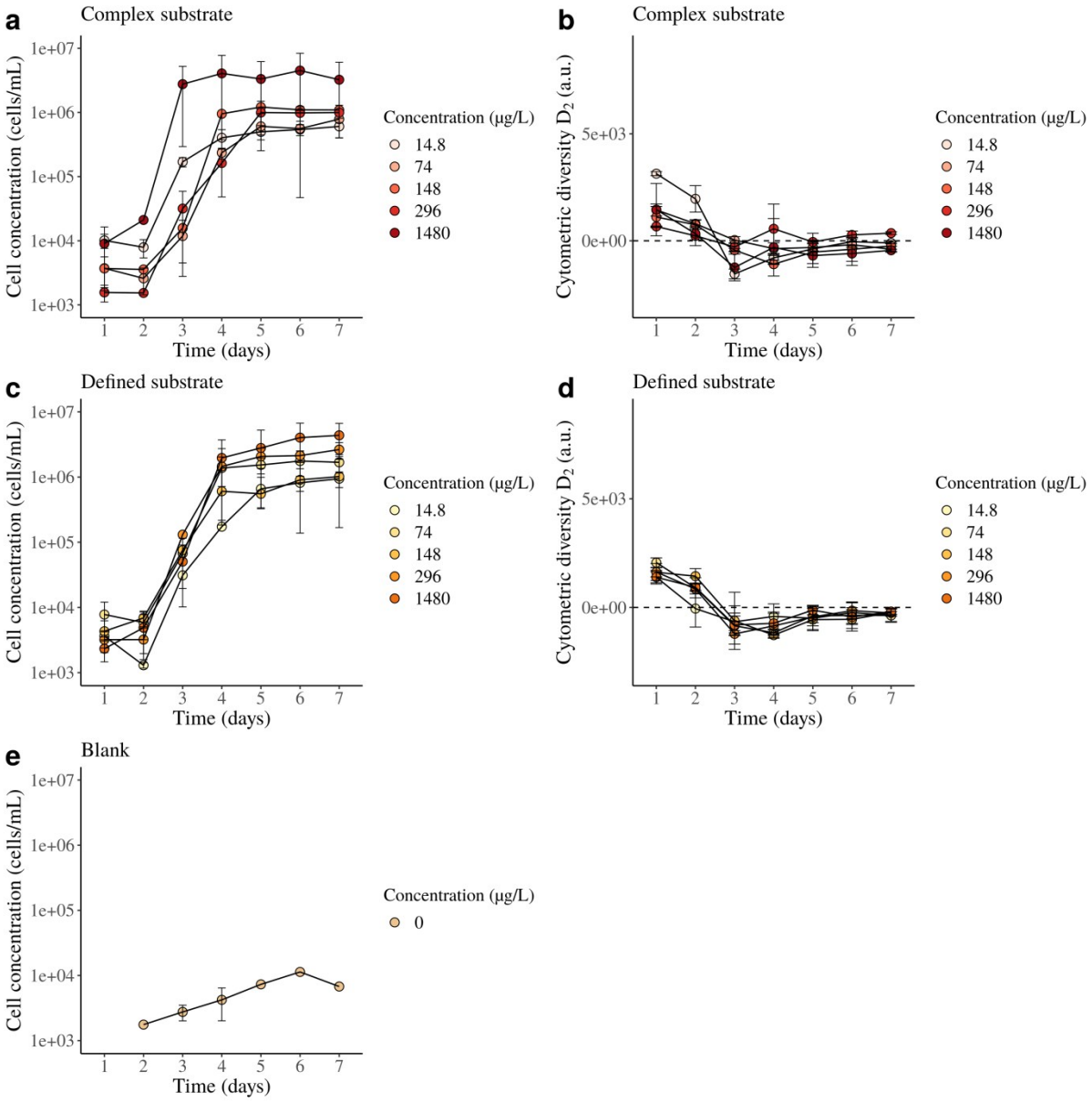

Figure S2: Average cell concentration and the standard deviation in function of time for the demineralized water spiked with different concentrations of a complex substrate (yeast extract) (**a**) and a defined medium with a C:N:P ratio of 20:5:1 (**c**). A blank sample was also analyzed (**e**). The average and normalized cytometric diversity index D_2 with the standard deviation (n=3) was calculated for each perturbation (**b, d**). The dashed line represents the blank samples as reference. The added concentrations were based on the relative increase of 1/10, 1/2, 1, 2 and 10 times the TOC concentration. The first time point of the blank samples was removed due to insufficient quality.

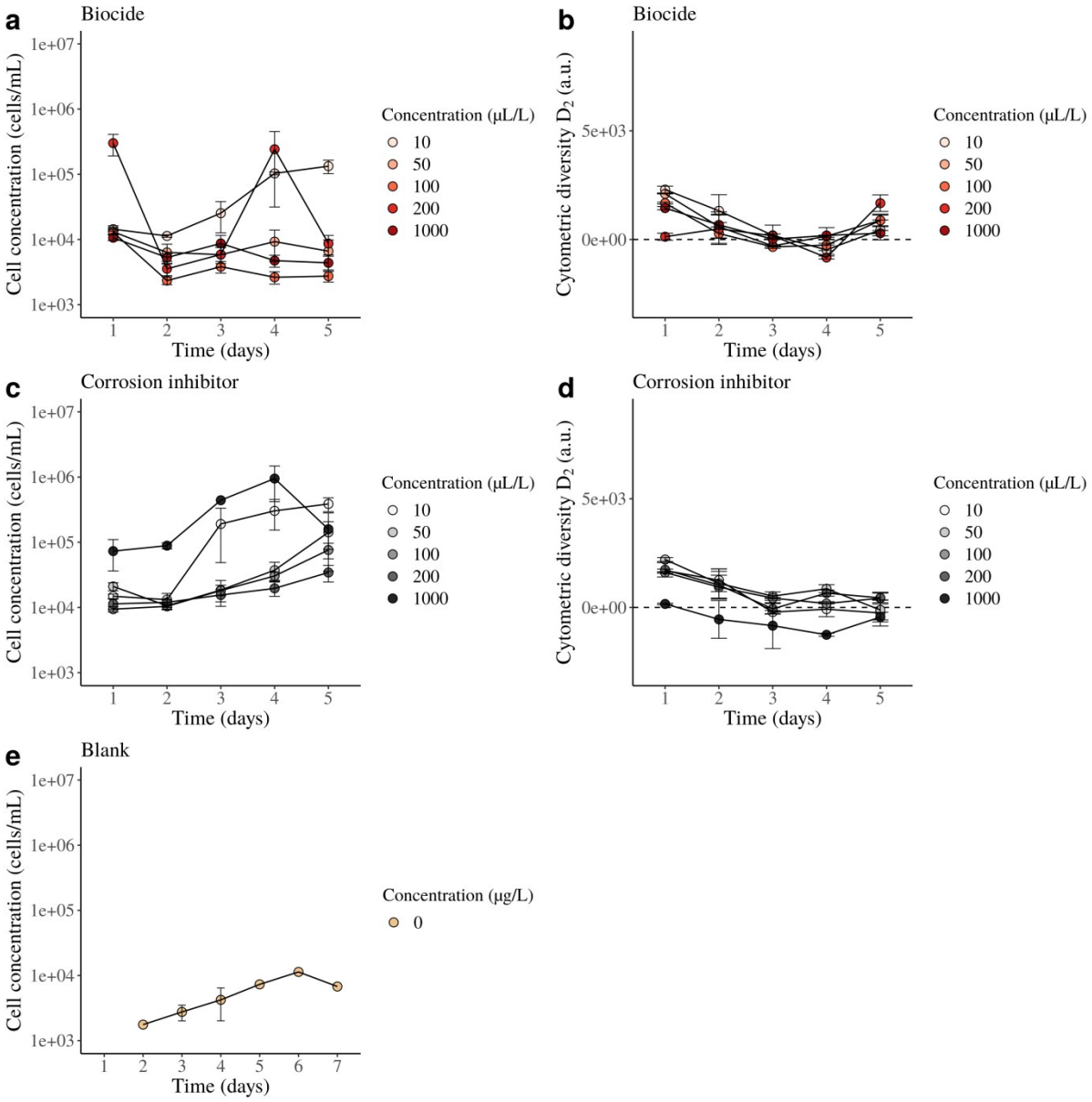

Figure S3: Average cell concentration and the standard deviation in function of time for the demineralized water spiked with different concentrations of a biocide (**a**) and a corrosion inhibitor (**c**). Also a blank sample was analyzed (**e**). The Average and normalized cytometric diversity index D_2 with the standard deviation (n=3) were calculated on the same samples (**b, d**). The dashed line represents the blank samples as reference. The added concentrations were 1/10, 1/2, 1, 2 and 10 times the advised concentration. The first time point of the blank samples was removed due to insufficient quality.