

Table S1

NOM concentrations and reactivity of surface water samples from the SW basin of Lake Grosse Fuchskuhle. Characteristics of 0.22 μm filtered water samples are compiled with respect to their reactivity and capacity to form singlet oxygen ($^1\text{O}_2$) and hydrogen peroxide (H_2O_2). UV-A/B: irradiation with 50 W m^{-2} of UV-A and 1 W m^{-2} UV-B (Helarium B1-12-40W, Wolff System). SW: South-West basin of Lake Grosse Fuchskuhle, AFW: Acidic Fen Water.

Parameter	Samples			
	2006 SW	2008 SW	2009 SW	2008 AFW
DOC (mg C L^{-1})	23.3 \pm 1.8	34.0 \pm 0.1	28.4 \pm 1.1	19.3 \pm 0.3
A₂₅₄	0.78	1.27	1.21	0.54
SUVA₂₅₄ ($\text{L mg}^{-1} \text{m}^{-1}$)[†]	3.3	3.7	4.3	2.8
[$^1\text{O}_2$]_{SS} UV-A/B (10^{-14} M)	16.7 \pm 1.5	18.8 \pm 0.3	20.8 \pm 1.5	12.9 \pm 0.1
[$^1\text{O}_2$]_{SS} UV-A/B (10^{-14} M mg^{-1} DOC$^{-1}$ L$^{-1}$)	0.71	0.55	0,73	0,67
H₂O₂ UV-A/B ($\mu\text{M h}^{-1}$)	0.23 \pm 0.04	0.35 \pm 0.07	1.04 \pm 0.08	1.43 \pm 0.35
H₂O₂ UV-A/B ($\mu\text{M h}^{-1} \text{mg}^{-1}$ DOC$^{-1}$ L$^{-1}$)	9.3 x 10 ⁻³	10.3 x 10 ⁻³	36.6 x 10 ⁻³	74 x 10 ⁻³
Ratio: H₂O₂ ($\mu\text{M h}^{-1}$) / [$^1\text{O}_2$]_{SS} (10^{-14} M) \times 1000	13.8	18.6	50	110

[†]: SUVA₂₅₄: specific UVA absorbance at 254 nm; Determined after [1]
n.d.: not determined

Reference:

1. Weishaar JL, Aiken GR, Bergamaschi BA, Fram MS, Fujii R, et al. (2003) Evaluation of specific ultraviolet absorbance as an indicator of the chemical composition and reactivity of dissolved organic carbon. Environ Sci Technol 37: 4702-4708.