1 **Supplementary Materials**

2 **Authors:** Sofia Semitsoglou-Tsiapou, Michael R. Templeton, Nigel J.D. Graham, Suyash Mandal,
3 Lucía Hernández Leal, Joop C. Kruithof

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5 **Title**: Potential formation of mutagenicity by low pressure-UV/H_2O_2 during the treatment of
6 nitrate-rich source waters

Figures

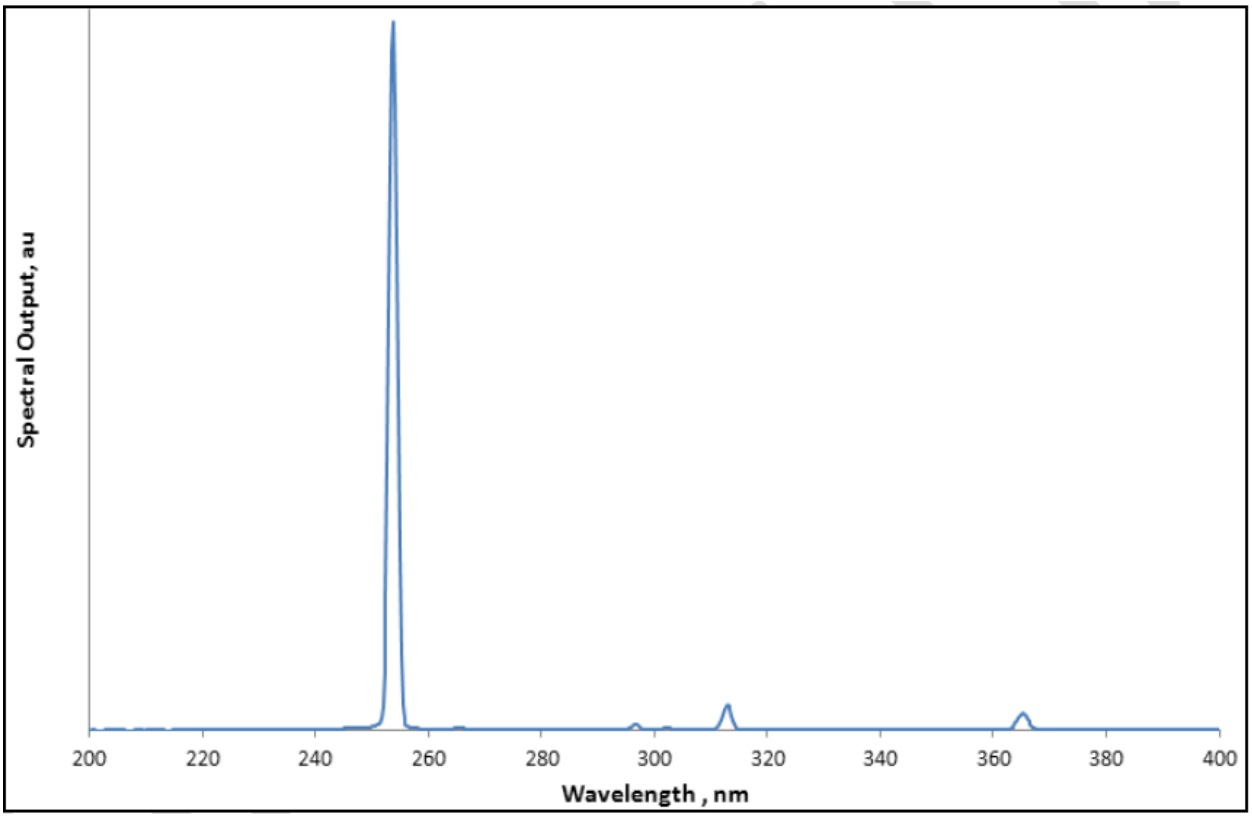
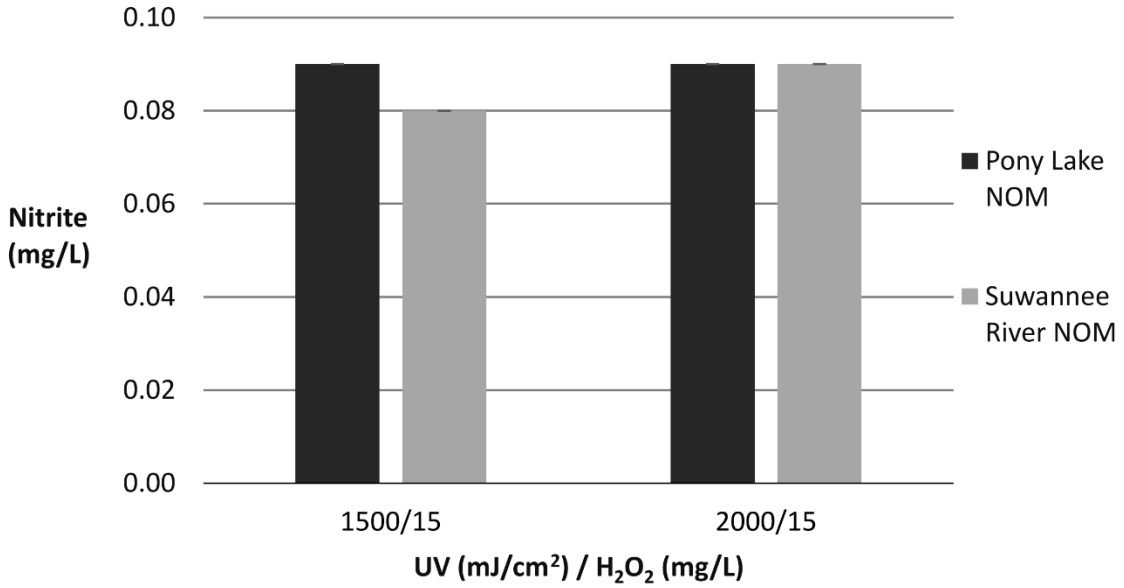


Figure S.1. Emission spectrum of the Low Pressure lamp used in the UV range (200-400 nm).



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11 **Figure S.2**. Nitrite concentrations produced by the LP-UV/H_2O_2 treatment of NOM solutions (4

12 mg/L) in the presence of nitrate (50 mg/L). The detection limit was 0.05 mg NO_2^- /L.

Tables

Table S.1. Number of positive wells in each condition and replicate and calculated values for mean, standard deviation (SD) and number-fold inductions compared to solvent control and baseline. Statistically significant different values ($p<0.05$) and number-fold inductions >3 for number-fold over solvent and > 2 for number-fold over baseline are marked in red. (S: Synthetic water samples, R: raw water samples from the drinking water treatment plant)

sample	plate 1			plate 2			plate 3			mean # positive wells	SD	baseline value	T test	fold solvent	fold baseline	% pos wells
	rep 1	rep 2	rep 3	rep 1	rep 2	rep 3	rep 1	rep 2	rep 3							
solvent	6	8	8	5	8	7	3	7	4	**6.22**	1.86	**8.08**				12.96
method	7	12	8	4	4	4	8	9	4	**6.67**	2.87	**9.54**	0.351	1.07	0.83	13.89
pos	46	46	47	46	47	48	48	47	47	**46.89**	0.78		0.000	**7.54**	**5.80**	97.69
S-samples																
16D018				6	7	3				**5.33**	2.08		0.250	0.86	0.66	11.11
16D019				10	10	4				**8.00**	3.46		0.134	1.29	0.99	16.67
16D020				5	1	4				**3.33**	2.08		0.023	0.54	0.41	6.94
16D021				10	12	7				**9.67**	2.52		0.014	1.55	1.20	20.14
16D022							7	9	4	**6.67**	2.52		0.373	1.07	0.83	13.89
16D023							7	2	11	**6.67**	4.51		0.402	1.07	0.83	13.89
16D024							10	10	5	**8.33**	2.89		0.082	1.34	1.03	17.36
16D025							5	10	3	**6.00**	3.61		0.444	0.96	0.74	12.50
R-samples																
16D026	13	10	12							**11.67**	1.53		0.001	1.88	1.44	24.31
16D027	7	10	9							**8.67**	1.53		0.034	1.39	1.07	18.06
16D028	6	8	9							**7.67**	1.53		0.128	1.23	0.95	15.97
16D029	10	13	9							**10.67**	2.08		0.003	1.71	1.32	22.22
16D030	7	2	3							**4.00**	2.65		0.067	0.64	0.50	8.33
16D031							3	4	5	**4.00**	1.00		0.041	0.64	0.50	8.33
16D032				8	11	7				**8.67**	2.08		0.041	1.39	1.07	18.06