

Table S1. Comparison of disinfectants: p-values from the post-hoc Tukey test.

Dosage	Turbidity type	Turbidity level [NTU]	NaDCC vs. NaOCl	ClO ₂ vs. NaDCC	ClO ₂ vs. NaOCl
2 mg/L	N/A	0	0.651	0.000	0.000
	Clay	10	0.674	0.000	0.000
		30	0.345	0.000	0.000
		100	0.542	0.000	0.000
		300	0.524	0.000	0.000
	Sediment	10	0.107	0.000	0.000
		30	0.008	0.000	0.000
		100	0.000	0.193	0.000
		300	0.140	0.000	0.000
4 mg/L	N/A	0	0.603	0.000	0.000
	Clay	10	0.424	0.000	0.000
		30	0.368	0.000	0.000
		100	0.669	0.000	0.000
		300	0.668	0.000	0.000
	Sediment	10	0.423	0.000	0.000
		30	0.004	0.000	0.000
		100	0.001	0.005	0.841
		300	0.012	0.001	0.000

Table 2. Calculated CT factors (mg min/L) for the three disinfectants under all tested conditions.

Time	Turbidity type	NTU	NaOCl		NaDCC		ClO ₂	
			2 mg/L	4 mg/L	2 mg/L	4 mg/L	2 mg/L	4 mg/L
1 hour	None	0	106.9	224.2	111.5	240.0	62.4	127.0
		10	109.3	223.5	117.4	244.2	54.1	110.3
		30	105.7	202.4	118.5	244.6	54.4	107.8
		100	104.0	224.9	113.6	242.6	54.5	104.4
		300	105.3	216.6	115.2	234.3	52.6	103.2
	Sediments	10	90.0	196.6	105.3	214.5	56.2	124.2
		30	74.9	170.6	92.2	202.7	61.1	120.9
		100	31.8	118.5	49.0	130.7	55.4	114.6
		300	6.0	25.3	9.3	61.8	41.5	100.2
	None	0	2371.2	5200.8	2546.4	5371.2	218.4	379.2
		10	2452.8	5121.6	2668.8	5714.4	129.6	235.2
		30	2340.0	4797.6	2647.2	5544.0	146.4	232.8
		100	2308.8	5047.2	2616.0	5395.2	132.0	240.0
		300	2364.0	4867.2	2606.4	5194.3	153.6	249.6
	Sediments	10	1449.6	3753.6	1737.6	4420.8	120.0	242.4
		30	554.4	1771.2	916.8	3316.8	88.8	223.2
		100	36.0	175.2	60.0	556.8	76.8	158.4
		300	48.0	79.2	76.8	93.6	93.6	141.6

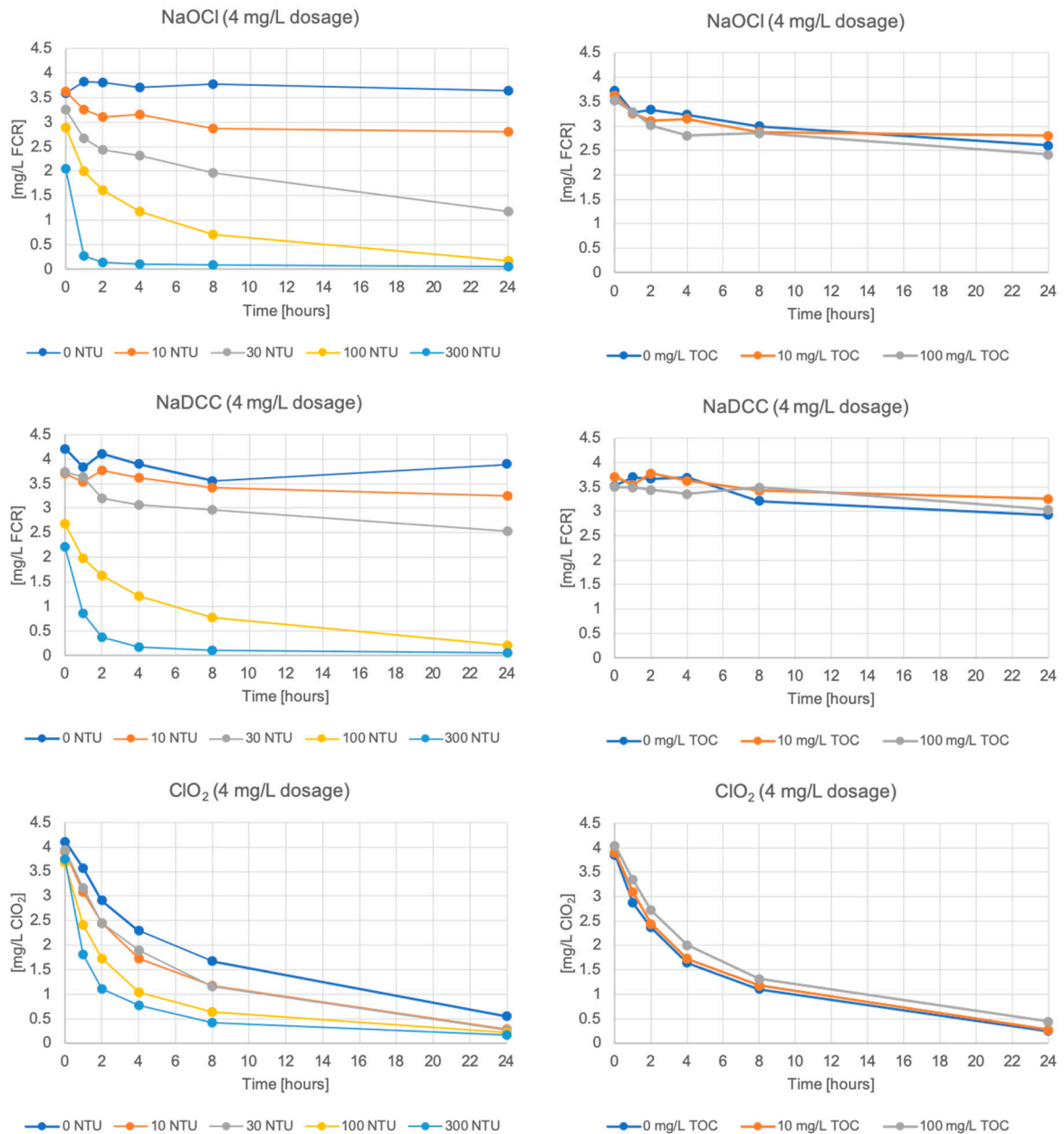


Figure 1. Disinfectant residual concentration over time at varying turbidity from clay (left) and varying added TOC (right) for the 4 mg/L dosage.