

Supplementary Table S1. Detailed experimental condition.

Type of Water	Wavelength (nm)	Light Intensity ($\mu\text{W}/\text{cm}^2$)	Irradiation Time (s)	UV Dosage (mJ/cm^2)	Study Parameter
Secondary effluent (after incubation)	280	964	0	0	<i>E. coli</i> and Total coliform
			4	4	
			10	10	
			20	19	
			0	0	
	280	385.6	10	4	
			25	10	
			50	19	
			0	0	
			20	4	
	280	192.8	50	10	
			100	19	
			0	0	
			40	4	
			100	10	
	280	96.4	200	19	
			0	0	
			60	576	
			120	1152	
			240	2304	
Secondary effluent	280	9640	0	0	
			120	576	
			240	1152	
			480	2304	
			0	0	
	280	4820	300	576	cATP
			600	1152	
			1200	2304	
			0	0	
			300	34	
Secondary effluent (after incubation)	405	112,000	600	67	
			1200	134	
			1800	202	
			0	0	
			1800	202	
Secondary effluent	405	112,000	3600	403	cATP
			5400	605	
			0	0	
Primary influent	280	96.4	0	0	

			25	2	
			50	5	
			200	19	
			400	39	
			0	0	
			10	10	
	280	964	40	39	<i>E. coli</i> , Total coliform and SARS-Cov-2 N1
			100	96	
			200	193	
			0	0	
			10	96	
	280	9640	20	193	
			40	386	
			60	578	
			0	0	
			120	1157	
			300	2892	
DI water	280	9640	600	5784	BSA
			1800	17352	
			3600	34704	
			5400	52056	
			0	0	
DI water	280	9640	5400	52056	SARS-CoV-2 Spike protein
