Supplementary Materials

Selection of surrogate viruses for process control in detection of SARS-CoV-2 in wastewater

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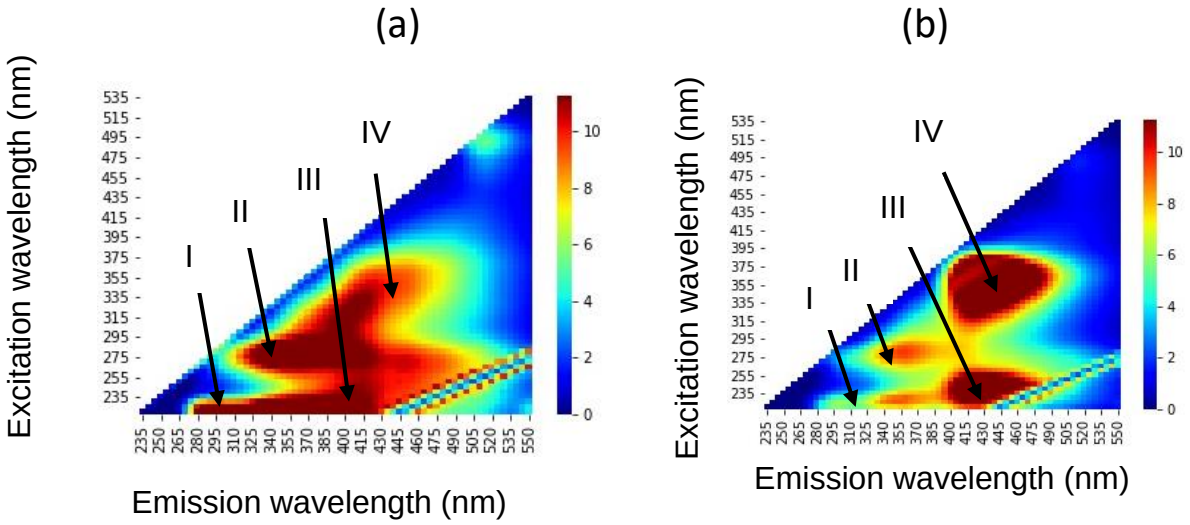

Fig.S1. EEM spectra of concentrate of liquids (a) wastewater A, and (b) wastewater B. Peak region I. Aromatic Protein, II. Soluble microbial by product-like, III. Fulvic acid-like IV. Humic acid-like

Table S1. Information of primers and probes used in this study

Target Virus	Primer/Probe	Sequence (5'-3')	Product size (bp)	Temperature for annealing	References
SARS-CoV-2	2019-nCoV_N1-F	GACCCCAAAATCAGCGAAAT	72	60 °C	CDC, 2020
	2019-nCoV_N1-R	TCTGGTTACTGCCAGTTGAATCTG			
	2019-nCoV_N1-P	[FAM]-ACCCCGCATTACGTTTGGTGGACC-[BHQ1]			
Phi 6	Phi6_F	TGGCGGCGGTCAAGAGC	100	60 °C	Gendron et al., 2010
	Phi6_R	GGATGATTCTCCAGAAGCTGCTG			
	Phi6_P	[FAM]-CGGTC GTCGCAGGTCTGACACTCGC-[BHQ1]			
PMMoV	PMMV-FP1-rev	GAGTGGTTTGACCTTAACGTTTGA	68	60°C	Zhang et al., 2006
	PMMV-RP1	TTGTCGGTTGCAATGCAAGT			
	PMMV-Probe1	[FAM]-CCTACCGAAGCAAATG-[MGB-NFQ]			
MNV	MNV-S	CCGCAGGAACGCTCAGCAG	129	60 °C	Kitajima et al., 2010
	MNV-AS	GGYTGAATGGGGACGGCCTG			
	MNV-TP	[HEX]-ATGAGTGATGGCGCA-[MGB-NFQ]			

Table S2. Sequence of the synthetic standard ssDNA. Complementary sequences to primers and probe are highlighted in green and pink, respectively. Dummy sequence inserted in CDCN1 standard is highlighted in yellow.

STDART_CDCN1 (92bp), GC content: 48% GACCCCAAAATCAGCGAAATGGGTAGCCTTGAATACTACTACACCCCGCATTACGTTTGGTGGACCCTCAGATTCAACTGGCAGTAACCAGA
STD_ϕ6 (100bp), GC content: 60% TGGCGGCGGTCAAGAGCAACCCGGTCGTCGCAGGTCTGACACTCGCTCAGATCGGAAGCACCGGTTATGACGCCTATCAGCAGCTTCTGGAGAATCATCC
STD_PMMoV (68bp), GC content: 50% GAGTGGTTTGACCTTAACGTTTGAGAGGCCTACCGAAGCAAATGTCGCACTTGCATTGCAACCGACAA
STD_MNV (129bp), GC content: 60% CCGCAGGAACGCTCAGCAGTCTTTGTGAATGAGGATGAGTGATGGCGCAGCGCCAAAAGCCAATGGCTCTGAGGCCAGCGGCCAGGATCTTGTTCCTGCCGCCGTTGAACAGGCCGTCCCCATTCAACC

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