

Supplementary Material

Detection of SARS-CoV-2 in wastewater in Japan during a COVID-19 outbreak.

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TABLE
Table S1. Characteristics of the WWTPs used in this study.

WWTP	Prefecture	Population served by WWTP	Sewered population rate (%)	Maximum treatment capacity (m ³ /d)	Actual treatment capacity (m ³ /d)
A	Ishikawa	31,501	92.9	12,800	9,348
B	Ishikawa	112,396	91.4	53,300	37,106
C	Ishikawa	150,223	98.9	156,000	86,446
D	Toyama	169,400	91.1	82,500	55,639
E	Toyama	233,480	97.5	143,500	109,500

Table S2. Physico-chemical characteristics of influent wastewater in each WWTP during the study period. The data were provided by each WWTP.

WWTP		Water temperature °C	pH -	SS mg/L	COD mg/L
A ^a	Ave. ± SD	17.7 ± 1.6	7.7 ± 0.1	115.9 ± 19.4	65.9 ± 11.7
(March 12 – May 28)	(Min-Max)	(16.0-21.5)	(7.7-7.9)	(89.0-152.0)	(44.4-80.4)
B ^b	Ave. ± SD	18.3 ± 1.5	7.9 ± 0.0	179.7 ± 22.1	155.3 ± 25.8
(March 5 – May 28)	(Min-Max)	(16.6-21.1)	(7.9-8.0)	(142.0-212.0)	(118.0-222.0)
C ^c	Ave. ± SD	N.A.	N.A.	N.A.	N.A.
(March 6 - April 21)	(Min-Max)				
D	Ave. ± SD	22.0 ± 1.6	7.1 ± 0.1	100.7 ± 48.0	60.5 ± 12.7
(March 6 – May 29)	(Min-Max)	(19.5-24.4)	(6.8-7.2)	(40.0-221.0)	(43.0-83.0)
E	Ave. ± SD	21.1 ± 0.5	7.2 ± 0.0	300.0 ± 10.0	113.3 ± 5.8
(May 15 – May 29)	(Min-Max)	(20.7-21.7)	(7.2-7.2)	(290.0-310.0)	(110.0-120.0)

^a: The parameters were measured the day before our sample collection.

^b: COD was measured the day before our sample collection, while other parameters were measured on the day of our sample collection.

^c: The data were not available (N.A.).

FIGURE

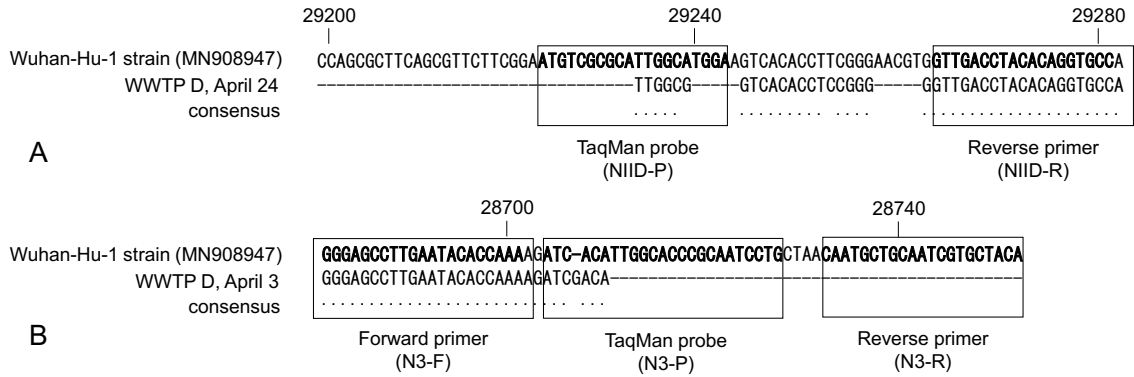


Figure S1. Determined sequence of a qRT-PCR amplicon obtained from a sample at WWTP D on April 3 by N3 assay (A) and on April 24 by NIID assay (B). The sequence was aligned with a reference strain (Wuhan-Hu-1 strain, genbank accession number: MN908947).