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# Summary of preliminary results from wastewater analysis for tracing SARS-CoV-2 in Stockholm at Käppalaverket, Lidingö

Summary of preliminary results from wastewater analysis for tracing SARS-CoV-2 in Stockholm.

Sampling of wastewater has been done since April at Käppala wastewater treatment plants (WWTP) on Lidingö. Käppala WWTP receives wastewater from a population of around 500,000 from the northern and eastern greater Stockholm Region. During the sampling period, the number of COVID-19 confirmed cases in Stockholm region has remained high.

After concentration, filtering and preparation, the samples have been analysed using qPCR technique for genetic material (RNA) belonging to the virus SARS-CoV-2, known to cause the COVID-19 pandemic. Two samples from incoming (raw) wastewater (end of April, week 18) and two samples of treated wastewater (same week) have been analyzed.

**Virus have been traced in the samples from the incoming wastewater**. The preliminary assessment indicates that the virus concentration in the samples from Käppala incoming wastewater was similar to that found at Bromma and Henriksdal WWTP in earlier analyses (representing week 15 and 17).

Using the same analysis method as for incoming wastewater, **we have not been able detect the virus RNA in the samples from the outgoing wastewater.** We also note that total RNA (of any origin) was reduced by more than 95% in outgoing water compared to incoming water, andwasnearly undetectable in the concentrates analyzed. This result is aligned with preliminary results from a study in the Netherlands.

These results indicate replicability of our method and further confirms the potential of tracing SARS-CoV-2 in wastewater, as a useful method for monitoring the pandemic. More analyses and a larger dataset are necessary to optimize the method, make quantitative assessments and to monitor, or predict, trends.

KTH welcomes efforts now made by other actors to analyse wastewater in Sweden and we are coordinating our work with Uppsala University, SLU, RISE and others.

Please observe that water is not known to be a transmission pathway for COVID-19.

Zeynep Cetecioglu Gurol, Associate Professor

*Principal investigator*

Cecilia Williams, Professor

Anders Andersson, Associate Professor

Prosun Bhattacharya, Professor

David Nilsson, Associate Professor

*Co-investigators*

KTH Royal Institute of Technology