

[Previous PDF](#)[Next PDF](#)

Science of the Total Environment 804 (2022) 150244

Contents lists available at ScienceDirect

Science of the Total Environment

journal homepage: www.elsevier.com/locate/scitotenv

 ELSEVIER



Monitoring SARS-CoV-2 in sewage: Toward sentinels with analytical accuracy

David Calderón-Franco ^a, Laura Orschler ^b, Susanne Lackner ^b, Shelesh Agrawal ^{b,1}, David G. Weissbrodt ^{a,*1}

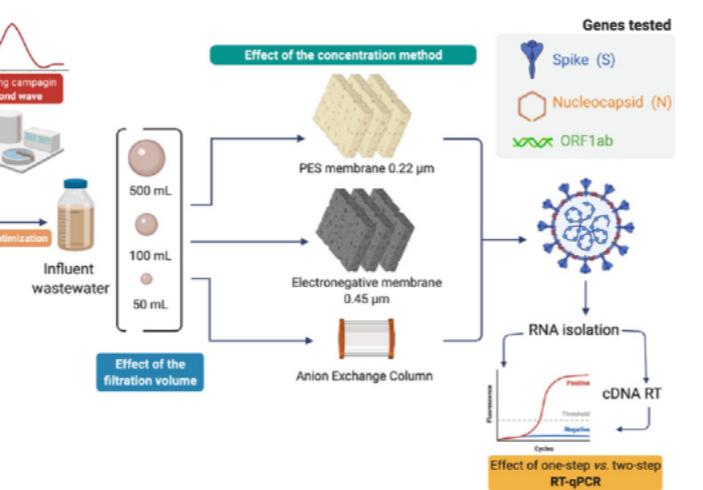
^a Department of Biotechnology, Delft University of Technology, van der Maasweg 9, 2629, HZ, Delft, the Netherlands

^b Technische Universität Darmstadt, Institute IWAR, 8 Franziska-Braun-Straße 7, 64287 Darmstadt, Germany

HIGHLIGHTS

- Higher volumes of influent wastewater filtered displayed uniform viral gene quantification, especially when low incidence values were reported.
- Electronegative membranes were optimal and cheap for the concentration of SARS-CoV-2 from pre-settled influent wastewater.
- Employing a two-step RT-qPCR method enhances the resolution for low viral loads samples.
- Column-based RNA purification without multiple purification steps outperformed magnetic beads throughout the sampling campaign.

GRAPHICAL ABSTRACT



Recommended Articles

Validating and optimizing the method for molecular detection and quantification of SARS-CoV-2 in wastewater

Yuanyuan Qiu, ... ⁺⁹ ... , Xiaoli Pang

Science of The Total Environment • Available online 4 November 2021

Preview View PDF Save PDF

SARS-CoV-2 loads in urine, sera and stool specimens in association with clinical features of COVID-19 patients

Déborah Anjos, ... ⁺⁷ ... , Menira Souza

Journal of Clinical Virology Plus • February 2022

Preview View PDF Save PDF

Enumerating asymptomatic COVID-19 cases and estimating SARS-CoV-2 fecal shedding rates via wastewater-based epidemiology

Bradley W. Schmitz, ... ⁺⁷ ... , Ian L. Pepper

Science of The Total Environment • 20 December 2021