

Lettre de Veille Scientifique n°3 27 mars 2023

Dernières actualités

Analyse de risque liée aux variants émergents de SARS-CoV-2 MAJ au 15/02/2023 ([Santé Publique France, 15/02/23](#))

Données de SRAS-CoV-2 dans les eaux usées au Québec ([INSPQ, 15/02/23](#))

Rats in the New York City sewer system test positive for SARS-CoV ([Outbreak News Today, 12/03/23](#))

Autres virus d'intérêt :

La surveillance basée sur les eaux usées est efficace pour détecter les épidémies virales dans les écoles ([Ma Clinique, 02/03/23](#))

Wastewater Testing For Polio In Select Communities ([Water Online, 16/02/23](#))

Un poliovirus sauvage de type 3 échappé d'un laboratoire aux Pays-Bas ([mesVaccins.net, 18/02/23](#))

A review of respiratory viruses monitored in wastewater samples ([News Medical Life Sciences, 28/02/23](#))

Next epidemic could be spotted early in wastewater ([ScienceDaily, 22/03/23](#))

Wastewater surveillance should be used to detect viral outbreaks in schools ([Clinical Trials Arena, 10/03/23](#))

Localis-eau : Mieux mobiliser l'historique des données de qualité de l'eau pour la recherche en épidémiologie ([Challenge Green Data for Health, 03/23](#))

Dernières références bibliographiques

A case study of a community-organized wastewater surveillance in a small community: correlating weekly reported COVID-19 cases with SARS-CoV-2 RNA concentrations, fall 2020 to summer 2021 in Yarmouth, ME. *Journal of Water and Health*, in press. [Abstract >>](#)

Rise and fall of SARS-CoV-2 variants in Rotterdam: Comparison of wastewater and clinical surveillance. *Science of The Total Environment*, 873, 162209. [Abstract >>](#)

Épidémiologie basée sur les eaux usées : actualité et futur d'une méthode épidémiologique alternative, pour détecter et suivre les épidémies. *Enjeux numériques*, 21. [Abstract >>](#)

Detection of the Omicron BA.1 Variant of SARS-CoV-2 in Wastewater From a Las Vegas Tourist Area. *JAMA Netw Open*, 6 (2), e230550. [Abstract >>](#)

Genomic surveillance reveals early detection and transition of Delta to Omicron Lineages of SARS-CoV-2 Variants in wastewater treatment plants of Pune, India. *medRxiv*, 2023.02.21.23286222. [Abstract >>](#)

Normalization Practices for SARS-CoV-2 Data in Wastewater-based Epidemiology. *National Collaborating Centre for Infectious Diseases*, 16 p. [Fulltext >>](#)

Safer at school early alert: an observational study of wastewater and surface monitoring to detect COVID-19 in elementary schools. *The Lancet Regional Health - Americas*, 19, 100449. [Abstract >>](#)

A Review of the Survival of the Coronavirus Family in Feces, Urine, and Wastewater. *Avicenna Journal of Environmental Health Engineering*, 9 (2). [Abstract >>](#)

Monitoring of SARS-CoV-2 concentration and circulation of variants of concern in wastewater of Leuven, Belgium. *Journal of Medical Virology*, in press. [Abstract >>](#)

WBE joins AI: improving WBE protocols to support the construction of predictive ML models. *Research Square*, 15 Feb, 2023. [Abstract >>](#)

SARS-CoV-2 Wastewater Surveillance in Ten Cities from Mexico. *Water* 2023, 15(4), 799. [Abstract >>](#)

Divergence of wastewater SARS-CoV-2 and reported laboratory-confirmed COVID-19 incident case data coincident with wide-spread availability of at-home COVID-19 antigen tests. medRxiv, 2023.02.09.23285716. [Abstract >>](#)

Epidemiological surveillance and environmental hygiene, SARS-CoV-2 infection in the community, urban wastewater control in Cyprus, and water reuse. Journal of Contemporary Studies in Epidemiology and Public Health, 4 (1), ep23003. [Abstract >>](#)

Prediction of hospitalisations based on wastewater-based SARS-CoV-2 epidemiology. Science of The Total Environment, 873, 162149. [Abstract >>](#)

Surveillance of SARS-CoV-2 in sewage from buildings housing residents with different vulnerability levels. Science of The Total Environment, 872, 162116. [Abstract >>](#)

Quantification of SARS-CoV-2 Prevalence Using Wastewater Surveillance. University of Nevada, Las Vegas. [Abstract >>](#)

The Inhibition and Variability of Two Different RT-qPCR Assays Used for Quantifying SARS-CoV-2 RNA in Wastewater. Food and Environmental Virology, in press. [Abstract >>](#)

Contribution of wastewater-based epidemiology to SARS-CoV-2 screening in Brazil and the United States. Journal of Water and Health, in press. [Abstract >>](#)

The role of wastewater-based epidemiology for SARS-CoV-2 in developing countries: cumulative evidence from South Africa supports sentinel site surveillance to guide public health decision-making. medRxiv, 2023.02.13.23285226. [Abstract >>](#)

Wastewater genomic surveillance tracks the spread of the SARS-CoV-2 Omicron variant across England. medRxiv, 2023.02.15.23285942. [Abstract >>](#)

The growing need to establish a global wastewater surveillance consortium for future pandemic preparedness. Journal of Travel Medicine, in press. [Abstract >>](#)

A wastewater-based risk index for SARS-CoV-2 infections among three cities on the Canadian Prairie. Science of The Total Environment, 876, 162800. [Abstract >>](#)

Wastewater surveillance uncovers regional diversity and dynamics of SARS-CoV-2 variants across nine states in the USA. *Science of The Total Environment*, 877, 162862. [Abstract >>](#)

Integrating Water Purification with Electrochemical Aptamer Sensing for Detecting SARS-CoV-2 in Wastewater. *ACS Sensors*, in press. [Abstract >>](#)

Methods and resources needed in treating SARS-CoV-2 in wastewater. *Population Medicine*, 3, 5. [Abstract >>](#)

Evaluation of intra- and inter-lab variability in quantifying SARS-CoV-2 in a state-wide wastewater monitoring network. *Environ. Sci.: Water Res. Technol.*, in press. [Abstract >>](#)

Robust Performance of SARS-CoV-2 Whole-Genome Sequencing from Wastewater with a Nonselective Virus Concentration Method. *ACS EST Water*, in press. [Abstract >>](#)

Sewer biofilms and SARS-CoV-2. *Nature Reviews Microbiology*, in press. [Abstract >>](#)

Development of a Droplet Digital PCR to Monitor SARS-CoV-2 Omicron Variant BA.2 in Wastewater Samples. *Microorganisms* 2023, 11(3), 729. [Abstract >>](#)

Development of a Rapid and Specific MALDI-TOF Mass Spectrometric Assay for SARS-CoV-2 Detection. *medRxiv*, 2023.03.10.23287091. [Abstract >>](#)

Persistence of SARS-CoV-2 and its surrogate, bacteriophage Phi6, on surfaces and in water. *bioRxiv*, 2023.03.14.532590. [Abstract >>](#)

Community-wide infectious disease and immune response tracking using wastewater proteomics. *ChemRxiv*, Mar 14, 2023. [Abstract >>](#)

Wastewater surveillance for earlier detection of COVID-19 outbreaks in Ontario. *Canada Communicable Disease Report*, 49 (2-3). [Abstract >>](#)

Long-term wastewater-based surveillance and impacts of the COVID-19 pandemic on drug use trends in a U.S. Northeast rural town. *Science of The Total Environment*, 877, 162806. [Abstract >>](#)

Comparison of the methods for isolation and detection of SARS-CoV-2 RNA in municipal wastewater. *Frontiers in Public Health*, 11. [Abstract >>](#)

Evaluating the theoretical performance of aircraft wastewater monitoring as a tool for SARS-CoV-2 surveillance. medRxiv, 2023.03.07.23286894. [Abstract >>](#)

Wastewater surveillance of SARS-CoV-2 variants in October–November 2022 in Italy: detection of XBB.1, BA.2.75 and rapid spread of the BQ.1 lineage. Science of The Total Environment, 873, 162339. [Abstract >>](#)

Co-occurrence of BA.1 and BA.2 at the start of Singapore's Omicron wave revealed by Community and University Campus wastewater surveillance. Science of The Total Environment, 875, 162611. [Abstract >>](#)

SARS-CoV-2 raw wastewater surveillance from student residences on an urban university campus. Frontiers in Microbiology, 14. [Abstract >>](#)

Spatially-resolved wastewater-based surveillance enables COVID-19 case localization across a university campus, and confirms lower SARS-CoV-2 RNA burden relative to the surrounding community. medRxiv, 2023.03.03.23286756. [Abstract >>](#)

Shedding of SARS-CoV-2 genome in wastewater after COVID-19 outbreaks at nursing care homes in Japan: An ad-hoc survey. Research Square, 06 Mar, 2023. [Abstract >>](#)

Campus Sewage Water Surveillance based dynamics and infection trends of SARS-CoV-2 variants during third wave of COVID-19 in Pune, India. medRxiv, 2023.03.02.23286683. [Abstract >>](#)

Assessment of virus concentration methods for detecting SARS-CoV-2 IN wastewater. Brazilian Journal of Microbiology, in press. [Abstract >>](#)

Operationalizing an open-source dashboard for communicating results of wastewater-based epidemiology. EarthArXiv, 2023-03-03. [Abstract >>](#)

Wastewater-Based Epidemiology Surveillance for Early Detection SARS-CoV-2: Method Development. University of Illinois at Chicago. [Abstract >>](#)

Effects of Temperature and Water Types on the Decay of Coronavirus: A Review . Water 2023, 15(6), 1051. [Abstract >>](#)

The impact of signal variability on epidemic growth rate estimation from wastewater surveillance data. medRxiv, 2023.03.07.23286904. [Abstract >>](#)

Evaluation of intra- and inter-lab variability in quantifying SARS-CoV-2 in a state-wide wastewater monitoring network. *Environmental Science: Water Research & Technology*, in press. [Abstract >>](#)

Moving forward with COVID-19: Future research prospects of wastewater-based epidemiology methodologies and applications. *Current Opinion in Environmental Science & Health*, in press. [Abstract >>](#)

Modeling Biases in SARS-CoV-2 infections Prediction using Genome Copies Concentration in Wastewater. *medRxiv*, 2023.03.06.23286832. [Abstract >>](#)

Tracing COVID-19 Trails in Wastewater: A Systematic Review of SARS-CoV-2 Surveillance with Viral Variants. *Water* 2023, 15(6), 1018. [Abstract >>](#)

The city-wide full-scale interactive application of sewage surveillance programme for assisting real-time COVID-19 pandemic control – A case study in Hong Kong. *Science of The Total Environment*, 875, 162661. [Abstract >>](#)

Wastewater-based SARS-CoV-2 airport surveillance: key trends at the Cape Town International Airport. *Journal of Water and Health*, in press. [Abstract >>](#)

Short-term stability of wastewater samples for storage and shipment in the context of the EU Sewage Sentinel System for SARS-CoV-2. *Journal of Environmental Chemical Engineering*, in press. [Abstract >>](#)

SARS-CoV-2 wastewater-based epidemiology in an enclosed compound: A 2.5-year survey to identify factors contributing to local community dissemination. *Science of The Total Environment*, in press. [Abstract >>](#)

Improving wastewater-based epidemiology performance through streamlined automation. *Journal of Environmental Chemical Engineering*, 11 (2), 109595. [Abstract >>](#)

Aircraft Wastewater Surveillance for Early Detection of SARS-CoV-2 Variants — John F. Kennedy International Airport, New York City, August–September 2022. *Morbidity and Mortality Weekly Report*, 72 (8), 210-211. [Abstract >>](#)

Wastewater samples CANNOT be used for genome assembly. [Abstract >>](#)

Statistical Analysis of SARS-CoV-2 Using Wastewater-Based Data of Stockholm, Sweden. *Int. J. Environ. Res. Public Health* 2023, 20(5), 4181. [Abstract >>](#)

Autres virus d'intérêt :

Wastewater Surveillance for Communicable Diseases. Canadian Journal of Health Technologies, 3 (2). [Abstract >>](#)

Effectiveness of passive sampling for the detection and genetic characterization of human viruses in wastewater. Environmental Science: Water Research & Technology, in press. [Abstract >>](#)

In-network Sewage Surveillance Allow Source Apportionment for Public Health Pathogens of Concern. EGU General Assembly 2023. [Abstract >>](#)

Detection of pathogenic viruses in the urban wastewater in Kuwait—implications for monitoring viral disease outbreaks. Environmental Monitoring and Assessment, 195, 406. [Abstract >>](#)

Can wastewater monitoring protect public health in schools? The Lancet Regional Health, 20, 100475. [Abstract >>](#)

Not a Waste: Wastewater Surveillance to Enhance Public Health. University of Texas Health. [Abstract >>](#)

The impact of signal variability on epidemic growth rate estimation from wastewater surveillance data. medRxiv, 2023.03.07.23286904. [Abstract >>](#)

Targeted metagenomic sequencing for detection of vertebrate viruses in wastewater for public health surveillance. medRxiv, 2023.03.14.23287251. [Abstract >>](#)

Respiratory virus concentrations in human excretions that contribute to wastewater: A systematic review. medRxiv, 2023.02.19.23286146. [Abstract >>](#)

Wastewater-based epidemiology for comprehensive community health diagnostics in a national surveillance study: Mining biochemical markers in wastewater. Journal of Hazardous Materials, 450, 130989. [Abstract >>](#)

Monkeypox :

Predicting the Next Pandemic: Utilizing wastewater-based epidemiology as a novel technique for detecting mpox DNA. University of Nevada, Las Vegas. [Abstract >>](#)

Poliovirus :

Diagnostic Testing's Crucial Role in Addressing Polio's U.S. Reappearance: Clinical lab testing, wastewater surveillance, and vaccination efforts all collectively played a part in curbing the spread of polio in New York. Clinical Lab Products, 53 (1). [Abstract >>](#)

Influenza :

Impact of the COVID-19 pandemic on the prevalence of influenza A and respiratory syncytial viruses elucidated by wastewater-based epidemiology. Science of The Total Environment, in press. [Abstract >>](#)

Autres :

A Model-Based Framework to Assess the Feasibility of Monitoring Zika Virus with Wastewater-Based Epidemiology. ACS EST Water, in press. [Abstract >>](#)