Wastewater Sequencing Trend Report: Detection of SARS-CoV-2 Variants of **Concern by Metagenomic Sequencing**

Public Health Agency of Canada

Longitudinal wastewater sequencing data ending 2022-03-18

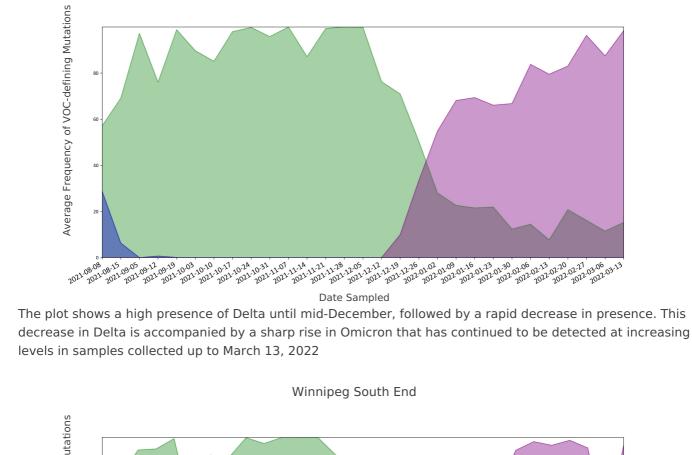
The plots show the percentage of three SARS-CoV-2 variants of concern (Alpha, Delta and Omicron) detected in wastewater samples collected from different sites using metagenomic sequencing. SARS-CoV-2 viral fragments present in the wastewater are isolated and sequenced to obtain a genomic "blueprint" of the virus. Each variant of concern carries small differences in their genomic "blueprint" called mutations that can be queried using specialized software to identify the presence and abundance of Alpha, Delta and Omicron present in the wastewater sample. The shaded areas in the plot show Delta in green, Omicron in purple and where applicable, Alpha in blue. Winnipeg

Alpha Delta

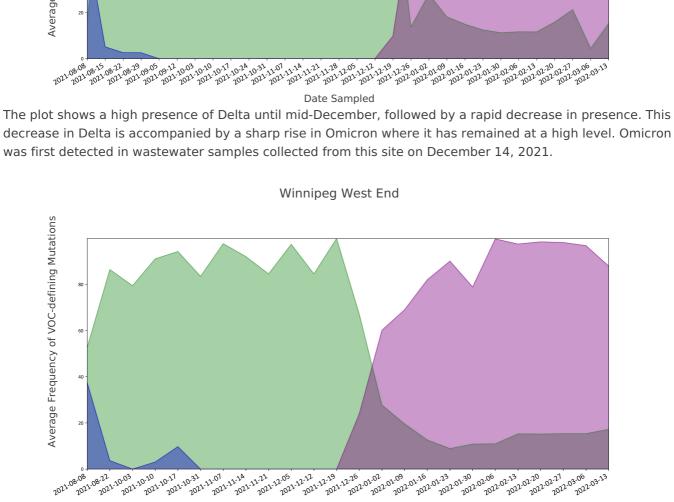
Winnipeg North End

Agence de la santé publique du Canada

Omicron



Average Frequency of VOC-defining Mutations



Date Sampled The plot shows a high presence of Delta until mid-December, followed by a rapid decrease in presence. This decrease in Delta is accompanied by a sharp rise of Omicron where it has remained at a high level. Omicron

was first detected in wastewater samples collected from this site on December 14 2021.