

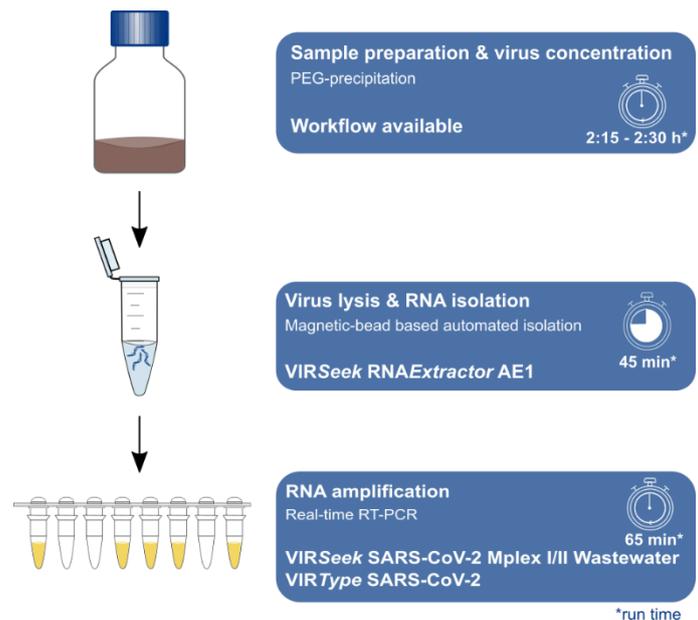
VIRSeek SARS-CoV-2 Solution Testing for Wastewater

Wastewater-based epidemiology has become an important approach in order to comprehensively monitor dynamics of SARS-CoV-2 infections in highly populated areas. Taken a recommendation on how to analyse for SARS-CoV-2 in wastewater published by the European Commission as a basis for development; the VIRSeek SARS-CoV-2 solution for wastewater includes all control measures highlighted.

After sampling a virus concentration step is recommended using a precipitation agent. Lysis of the virus pellet is the first step of the subsequent automated RNA isolation using the VIRSeek RNAExtractor AE1 validated for use on KingFisher™ Flex or GSD Auto-Pure96 System. The use of an extraction control virus helps to monitor RNA isolation efficiency such as included in the VIRSeek SARS-CoV-2 Mplex I or Mplex II Wastewater Multiplex assays. The latter kits are optimised for the analysis of SARS-CoV-2 virus in wastewater samples including the detection of water quality control indicators such as Pepper Mild Mottle Virus (PMMoV) or Cross-assembly phage.

A final confirmation of the different SARS-CoV-2 mutant variants, such as the arising Omicron variant, can be run using the VIRType SARS-CoV-2 assays in one combined analysis.

Wastewater Workflow



Key Benefits

- Comprehensive workflow from sampling and RNA isolation to real-time RT-PCR.
- High sensitivity and efficiency throughout the workflow including process monitoring controls
- Automated RNA isolation solution validated for use on KingFisher™ Flex System and the GSD Auto-Pure96 System
- High flexibility using real-time RT-PCR systems validated on Agilent (AriaMX™) and on Bio-Rad (CFX96 Touch™ + CFX96 Touch™ Deep Well)
- Identification of SARS-CoV-2 as well as several mutations including the arising Omicron, B.1.1529 Lineage
- Using one harmonised thermal profile
- Using wastewater specific water quality indicators in alignment with a recommendation published by the European Commission

Complementary VIRSeek Portfolio

- **VIRSeek RNAExtractor AE1**
RNA isolation kit based on magnetic beads for automated isolation
- **VIRSeek SARS-CoV-2 Mplex I Wastewater**
Real-time RT-PCR for the detection of SARS-CoV-2 (N1/N2), including MS2 phage as an extraction control and PMMoV as water quality indicator.
- **VIRSeek SARS-CoV-2 Mplex II Wastewater**
Real-time RT-PCR for the detection of SARS-CoV-2 (RdRP), including murine norovirus as an extraction control and Cross-assembly phage as water quality indicator.
- **VIRType SARS-CoV-2 (K417N)**
Real-time RT-PCR for detection of single point mutation such as in lineage B. 1.1.529 (Omicron)
- **VIRType SARS-CoV-2 (L452R)**
Real-time RT-PCR for single point mutation detection such as in lineage B. 1.617.2 (Delta)
- **VIRType SARS-CoV-2 (E484K)**
Real-time RT-PCR for single point mutation detection such as in lineages B. 1.351 (Beta) or P.1 (Gamma)

We are constantly expanding our VIRType-SARS-CoV-2 portfolio, particularly in regards to the variants of concern detected by the VIRType kits. For details regarding these kits please contact your local sales/customer service team.

