



## magnetiQ

### Wastewater RNA/DNA Extraction Kit

#### Introduction

Galenvs Wastewater Extraction Kit provides an efficient and high-throughput viral RNA/DNA from influent wastewater with light to heavy sludge content. Up to 10 mL can be processed with simple manual or semi-automated protocols in under 40 minutes. The kits utilized functionalized and differentiated magnetic functional particles for the concentration of the pathogen from a large sample volume and isolation of nucleic acid eluted. Pure RNA and DNA are concentrated into 100  $\mu$ L of elution buffer and can be used for microbial and pathogen detection, via qPCR, qRT-PCR and NGS depending on experimentation analysis needs

Galenvs's Wastewater RNA/DNA Extraction Kit is available in 100-prep bottled format (WW0100) and pre-filled ready-to-use 16 prep plates (WW0016).

#### Applications

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- Quantification via qPCR, qRT-PCR
- Next Generation Sequencing (NGS)

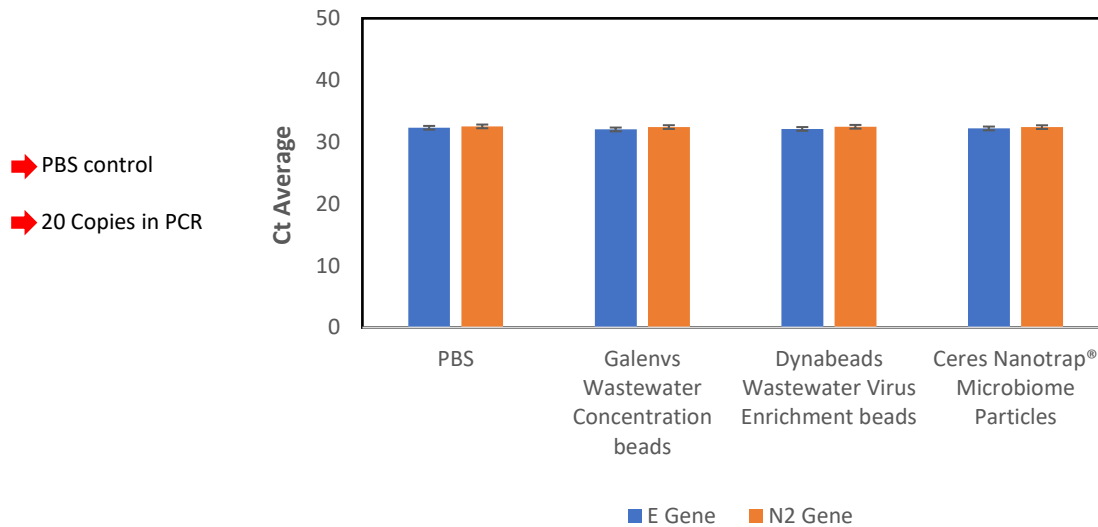
The kit has been optimized for the concentration of SARS-CoV-2 and other viral targets in wastewater samples. No Proteinase K treatment and no bead beating are required. Bead beating is only required to obtain a full microbiome profile with wastewater samples.



## Performance

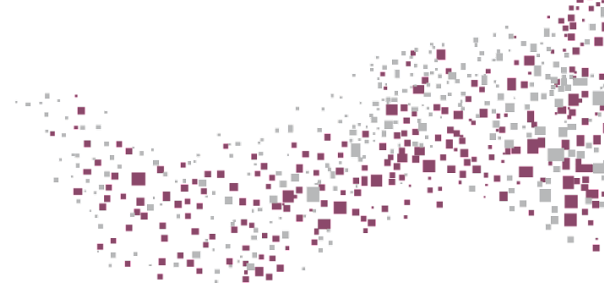
### qRT-PCR Results

SARS-CoV-2 nucleic acid extraction from 10 mL wastewater samples after automated pre-processing with magnetic beads.



**Figure 1.** Efficient virus concentration and isolation of SARS-CoV-2 RNA from 10 mL wastewater.

Wastewater samples spiked with SARS-CoV-2 were processed with Galenvs concentration beads to bind the virus, followed by lysis and RNA isolation using the Galenvs's Wastewater RNA/DNA Extraction Kit and qRT-PCR analysis. Ct values of the PBS control matched those of the wastewater samples for the N2 and E genes of SARS-CoV-2, indicating efficient virus binding and isolation. For the tested samples, Galenvs Wastewater RNA/DNA Extraction Kit outperformed also the widely used, ThermoFisher kits (with Dynabeads and Ceres Nantrap), in term of qRT-PCR results, and shows lower CT values.



### Specifications

Main sample type	Wastewater samples
Quantity	100 assays/ ready-to-use prefilled plates (16preps)
Elution Volume	100µl
RNA Recovery	99%
Processing Mode	Manual/Semi-Automated
Processing Technology	Magnetic Beads
Components	(i)Concentration Beads, (ii) Concentration Buffer, (iii) lysis, (iv) binding buffer, (v) wash #1 buffer, (vi) wash #2 buffer, and (vii)elution buffer
Storage	Room Temperature

### Product codes

100 preps	WW0100
16 preps ready-to-use prefilled plates	WW0016