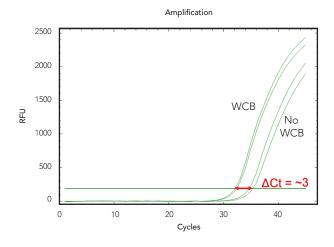


Zymo Environ[™] Water RNA Kit

- Enrich total RNA from large volumes (\leq 5 ml) and transform into small sample pellets for easy processing.
- Inactivates infectious agents and pathogens (viruses, bacteria, fungi, and parasites) for safe handling using DNA/RNA Shield[™].
- Remove PCR inhibitors in one spin and elute concentrated RNA in ≥6 µl. Ready for any downstream application including RT-qPCR, RTddPCR, NGS.

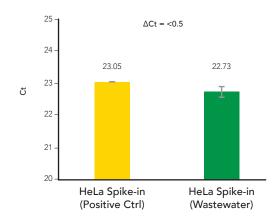


Increase Viral Recovery by 8-fold

The Zymo Environ™ Water RNA Kit includes Water Concentrating Buffer™ (WCB). 5 ml of SARS-CoV-2 positive wastewater was processed with and without WCB (n=2). RT-qPCR showed the addition of WCB shifted average Ct values earlier by ~3 (an 8-fold increase in viral recovery).

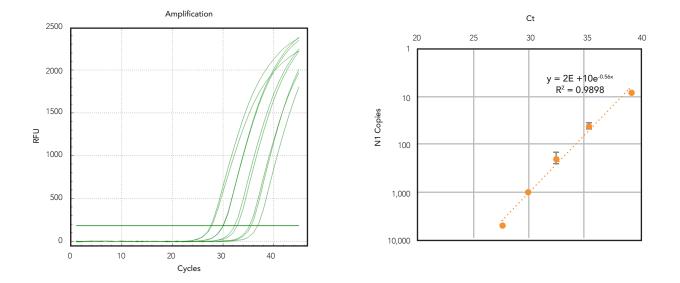
Inhibitor-Free RNA

Extracted Wastewater RNA is free of PCR Inhibitors. 50K HeLa cells were spiked into DNA/RNA Shield^m (positive extraction control) and into wastewater RNA was extracted (n=2) and RT-qPCR (Quasar 670) analysis showed the Δ Ct is <0.5, indicating the extraction system effectively removes inhibitors in wastewater. Samples were compared to a RT-qPCR plate positive control which amplified at 23.01 Ct.





Detect Down to 8 Viral Copies



Improved Limit of Detection (LOD). SARS-CoV-2 RNA was serially diluted from 5000 to 8 viral copies and spiked into SARS-CoV-2-negative proxy wastewater. RNA was extracted (n=2) using the Zymo Environ^T Water RNA Kit. RT-qPCR targeting the SARS-CoV-2 N1 gene showed the dilution is linear (R² = 0.9898) and the workflow was able to achieve an LOD of 8-40 copies.

Protocol Overview

- 1. Add 70 µl Water Concentrating Buffer[™] for every 1 ml wastewater, vortex.
- 2. Pellet and remove supernatant.
- 3. Resuspend pellet in DNA/RNA Shield[™].
- 4. Remove inhibitors with a single spin and purify ultra-pure concentrated RNA.

Product	Cat. No.	Size
Zymo Environ [™] Water RNA Kit	R2042	50 prep
Quick SARS-CoV-2 rRT-PCR Kit	R3011 R3011-1K R3011-10K	100 rxns 1,000 rxns 10,000 rxns
Quick SARS-CoV-2 Multiplex Kit	R3013 R3013-1K R3013-10K	100 rxns 1,000 rxns 10,000 rxns

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