

Sampling Wastewater for COVID-19

The Challenge

Community spread of COVID-19 is difficult to control because symptoms can take up to two weeks to appear after contracting the virus. Making this even more challenging is the fact that many cases remain asymptomatic. Since individual testing is not a viable option, communities, including universities, are searching for a more proactive approach to identify trends for early infection.



Testing wastewater on University of Virginia grounds to detect coronavirus.
(Source: Dr. Amy Mathers)

Wastewater Monitoring

- Testing COVID-19 in wastewater has been shown to be an effective tool for proactively minimizing community spread.
- COVID-19 has been detected in stool days before symptoms arise.
- Universities and municipalities are beginning to embrace this approach to identify hot spots within the community.
- Multiple success stories have been documented where wastewater surveillance in dorms, followed by individual COVID-19 testing, has led to early detection and containment.
- University of Arizona, University of Virginia, Utah State University and University of Colorado were among the first to utilize COVID-19 trends in the wastewater and take action to minimize community spread within dorms and throughout campus.

Cost-Effective, Scalable Solution

- Monitoring wastewater has helped identify COVID-19 early
 - Early virus stool shedding + efficient sample collection + rapid test method allows tracking changes in days vs. weeks
 - Includes information from asymptomatic and symptomatic individuals
 - Approximately 75 to 80% of U.S. population connected to sewer system
- Provides actionable insights that complement existing COVID-19 management strategies
- Cost effective and scalable at the community level compared to relying exclusively on individual testing
- Allows targeting of high-risk locations: Universities/Dorms, Public Schools, Prisons, Nursing Homes

COVID-19 Wastewater Testing (continued)

The Foundation for Your COVID-19 Wastewater Monitoring Program



Representative samples are key to an effective COVID-19 wastewater monitoring program. Hach compact portable samplers enable automated composite wastewater sample collection and can be deployed throughout communities; helping to prevent an outbreak when combined with laboratory testing.

- Intuitive interface with a large full-color display makes setup and installation easy—preventing errors
- Rugged and reliable pump minimizes maintenance requirements
- Compact base for smaller manhole applications



AS950 Portable Compact Sampler

Hach Portable Samplers

| MFR # | DESCRIPTION | WHAT'S INCLUDED? | STOCK # | EACH |
|----------------|---|---|---------|-------------|
| ASP.CXXXC161XX | AS950 Portable Compact Sampler Bundle w/ 2.5-Gal Sample Container, 12V | (1) AS950 Controller on Compact Portable Base (1) 12V Battery (1) Bottle Kit (includes 2.5-gal PE bottle w/ cap and full bottle shut-off) (1) 25-ft Vinyl Intake Tubing (1) Strainer (1) 12V Battery (battery charger 28946 sold separately) | 51388 | \$ 4,726.00 |
| ASP.CXXXC121XX | AS950 Portable Compact Sampler Bundle w/ 2.5-Gal Sample Container, 115V | (1) AS950 Controller on Compact Portable Base (1) 115V Power Supply (1) Bottle Kit (includes 2.5-gal PE bottle w/ cap and full bottle shut-off) (1) 25-ft Vinyl Intake Tubing (1) Strainer | 51387 | 4,339.00 |

Portable Sampler Accessories

| MFR # | DESCRIPTION | STOCK # | EACH |
|-----------|--|---------|-----------|
| 8754400 | 12V Lead-Acid Battery with 3-Pin Connector | 28947 | \$ 202.00 |
| 8753500US | Battery Charger Assembly, 115V | 28946 | 321.00 |
| 1355 | Suspension Harness for Portable Sampler | 28928 | 110.00 |
| 5713000 | Manhole Support Bracket/Spanner, 18 to 27" | 28930 | 342.00 |
| 9557 | Manhole Support Bracket/Spanner, 28 to 48" | 28925 | 829.00 |
| - | 2.5-Gallon Polyethylene Bottle Kit for AS950 | 28826 | 97.95 |

References

cdc.gov/coronavirus/2019-ncov/cases-updates/wastewater-surveillance
 who.int/news-room/commentaries/detail/status-of-environmental-surveillance-for-sars-cov-2-virus
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 wina.com/news/064460-uva-reports-covid-positives-in-three-more-dorms-over-the-weekend
 Kirby, A., & Mattioli, M. (2020, July 8). COVID-19 Sewage Surveillance [Webinar]. CDC
 cste.sharefile.com/share/view/s552abc13bbc436d8

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