



Sewage SARS-CoV-2 Surveillance Glossary

Composite Sample: A combined sample consisting of a collection of numerous individual discrete samples taken at regular intervals over a period of time, usually 24 hours.

COVID-19: The infectious disease caused by the newly discovered coronavirus SARS-CoV-2.

Enveloped Virus: A type of virus that has a lipid envelope that fuses with the host cell membrane to allow the virus entry.

Fecal Shedding: The amount of a particular organism or substance that is excreted in fecal waste, usually reported per gram – also called viral shedding.

Target Gene (Gene of Interest): A specific part of the genetic code of an organism that is being studied (often as an indicator of disease, potential health concern, etc.).

Grab Sample: A sample collected at one location at one point in time.

Infectious: An organism that is both viable and able to infect a host.

Inhibition: The presence of substances that impede the PCR reaction and can prevent detection of the target, causing a false negative result.

Negative Control: A test that is run with a batch of samples that is known not to include the target, and which therefore must produce a negative result as an assurance that there has been no cross-contamination.

Nucleic Acid Extraction: The process of extracting an organism's nuclear material to examine the genetic code, frequently used to identify and detect microorganisms in the environment.

PCR: Polymerase Chain Reaction, a molecular method that can selectively and specifically amplify a genetic target in a variety of clinical and environmental samples.

qPCR: Quantitative polymerase chain reaction, a method that multiplies target sequences of genetic material allowing small amounts to be detected and quantified.

Positive Control: A test that is run with a batch of samples that includes the target that you are looking for, and which must therefore produce a positive result as an assurance that the test has been appropriately conducted.

PPE: Personal protective equipment such as safety gloves and glasses, masks, or face shields.

RNA: Ribonucleic acid (SARS-CoV-2 is a positive sense, single-stranded RNA virus).

SARS-CoV-2: Severe Acute Respiratory Syndrome Coronavirus 2; the name of the virus causing the disease COVID-19.

Sewershed: The area served by sewer pipelines collecting wastewater that is delivered to a single endpoint.

Sewage Surveillance: Periodic analysis of wastewater samples for the presence of target material, organism or compound of interest to infer information about the population served by that system—also called sewershed surveillance.