

## Wastewater Surveillance Glossary

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

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

**DNA:** Deoxyribonucleic acid - a self-replicating material that is present in nearly all living organisms and makes up the organism's genetic code.

**cDNA:** Also called complementary DNA - a synthetic DNA that is complementary to a given RNA code.

**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 release of a pathogen or a substance in the person's fecal matter.

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

**Influenza (A and B):** Influenza, commonly known as seasonal flu, is an infection of the respiratory system caused by the influenza virus and characterized by fever and body aches, as well as upper respiratory tract symptoms.

**Inhibition:** The presence of substances that impedes 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 in order to detect the gene of interest.

**dPCR:** Digital polymerase chain reaction, is a specialized PCR method that estimates absolute numbers of DNA molecules in a sample through statistical methods (direct quantification).

**qPCR:** Quantitative polymerase chain reaction, a method that multiplies target sequences of genetic material (DNA) allowing small amounts to be detected and quantified with the use of standards (indirect quantification).

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

**RNA:** Ribonucleic acid - for some viruses, including SARS-CoV-2, the genetic code is stored in RNA (SARS-CoV-2 is a positive sense, single-stranded RNA virus).

**RSV:** RSV is short for respiratory syncytial virus (also called human orthopneumovirus) and is also used to refer to the respiratory tract infection caused by this 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 - the wastewater treatment facility.

**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.

**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.).