



FluidPrep Applications

Faster, Easier, Better sample enrichment

Environmental monitoring – QA efficiencies cleanliness, contamination, source tracking,

Product testing – for contamination, or quality in the case of spoilage organisms. Foods, Beverages, Pharma

Public Health – monitoring pathogens that affect the health of humans and animals.







Use Case: Concentration of large area surface samples

from cleanrooms

Customer/s: NASA Planetary Protection Laboratory

InnovaPrep's Solution: FluidPrep CP Select

Target: Viable-but-not-culturable contamination

Benefit: Enabled PCR detection of contamination within a

single shift, including many organisms that are

undetectable with traditional methods

Surfaces sampled up to several square feet





See seven NASA Publications https://www.innovaprep.com/technical-reports-and-presentations





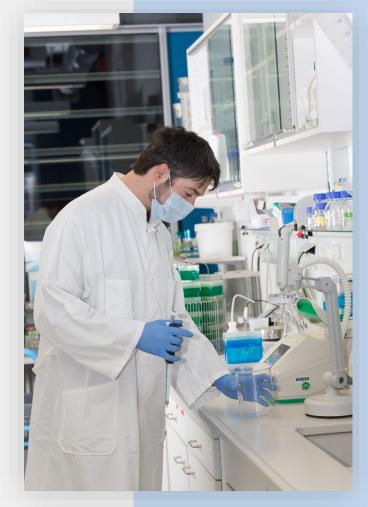
Use Case: Wastewater and environmental sampling for epidemiological tracking of COVID variants through sequencing

Customer/s: Government Joint Covid Outbreak Monitoring Task Force Great Britain and Northern Ireland

InnovaPrep's Solution: FluidPrep CP Select

Target: Human disease pathogen variants, antimicrobial resistant organisms

Benefit: This group recently published a peer reviewed paper that shows, compared to other methods, the CP Select is the best sample prep method for samples that will undergo sequencing because the concentration process is gentle on the RNA snips allowing better reads. Sequencing is the only method where variants of pathogens can be identified and will be the primary method of analysis for epidemiology.



National Laboratory Service









Use Case: Passenger flight screening for communicable disease pathogens

Customer/s: Australia's Commonwealth Scientific and Industrial Research Organization (CSIRO) collaboration with Notre Dame, University of Queensland, and Qantas

InnovaPrep's Solution: FluidPrep CP Select

Target: SARS-CoV-2 and other infections pathogens of concern

Benefit: Method allows screening of onboard wastewater from incoming flights, enabling detection of a single infected passenger with 90% confidence. Published study concluded that "The CP Select was used because it provides a faster concentration step than most other methods...and achieves relatively high recovery efficiency."









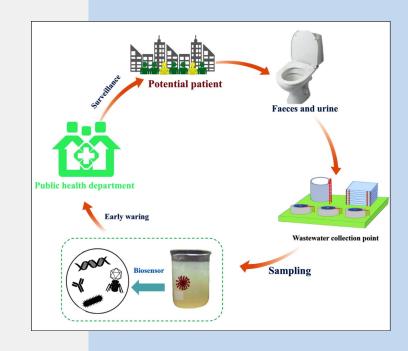


Use Case: Wastewater tracking of COVID variants through sequencing. Samples include drinking water, recreational waters, and other outbreak investigation samples.

Customer/s: USA State Public Health Laboratories

InnovaPrep's Solution: FluidPrep CP Select

Benefit: The CP Select process is gentle on the RNA SNPs, allowing better reads. Sequencing is the only method where variants of pathogens can be identified and will be the primary method of analysis for epidemiology.









Use Case: InnovaPrep Asian Distributors have successfully outfitted the Korean and Chinese Centers for Disease Control with Concentrating Pipettes to conduct rapid surveillance when an outbreak is suspected.

Client: Centers for Disease Control and Prevention

InnovaPrep's Solution: FluidPrep and AirPrep products

Targets: Enteric pathogens, infectious diseases, norovirus, legionella, etc.

Benefit: Fast, easy, sensitive results paired with PCR and sequencing for drinking water, food samples, and environmental samples such as recreational waters and cooling tower waters.

A norovirus outbreak at the 2018 Olympic games was identified by the Korea CDC using the Concentrating Pipette.

https://www.insidethegames.biz/articles/1063165/norovirus-outbreak-at-pyeongchang-2018-confirmed-to-have-been-caused-by-toilet-water-tanks













Use Case: Testing treated wastewater for viruses as it is converted to new resources to ensure disinfection is effective

Customer/s: Agbar, Suez (acquired by Veolia in 2022), global supplier of high-quality water, suited to every type of use.

InnovaPrep's Solution: FluidPrep CP Select

Target: Human disease pathogen variants, antimicrobial resistant organisms

Benefit: Concentrated large volumes of water enabling substantial reduction in time to detect pathogenic viruses, thus enabling water treatment operations to assess disinfection effectivity, improving remediation efforts and ensuring safety and quality of our drinking water.















Use Case: Plant virus in recirculating irrigation in

greenhouses

Customer/s: Top International Seed Breeding Company

InnovaPrep's Solution: FluidPrep CP Select

Target: Plant pathogens (mosaic virus, and etc)

Benefit: Early detection, reducing time to result from days to hours, saves product, time and resources, and prevention of widespread outbreak.

Capacity: 0.05µm tips 500mL samples









Use Case: Rapid identification of contaminated irrigation

water

Customer/s: Food growers

InnovaPrep's Solution: FluidPrep CP Select

Target: Disease causing organisms

Benefit: Improved sensitivity from large volume samples enables detection of contamination quickly to mitigate illness, death, and expensive recalls

USDA publications identify CP Select as excellent tool for irrigation water testing









Use Case

Problem:

- Catastrophic disease outbreaks in aquaculture are common.
- Hard to monitor because pathogens are so dilute
- Current method is primarily to autopsy the fish too late to prevent losses!

InnovaPrep Solution: Concentrating Pipette, and LVC Kit

Benefit: Concentration of large volumes of water enable substantial reduction in time to detect pathogenic organisms, thus presenting a method that could improve remediation efforts and prevent disease or death.







12





Use Case Success Story

Use Case: Metagenomics Research in Low Biomass Environments

Clients: Genomics Working Groups

InnovaPrep's Solution: AirPrep Sampler, CP Select, and Consumables

Benefit: Excellent results using sequencing to collect and concentrate airborne organisms, DNA/RNA and ability to identify or measure genomes

Direct quote: "Fast & easy modern methods for concentrating and enriching DNA and RNA are sorely needed for the genomics community".



