FREDsense®

COVID-19 Wastewater Surveillance Monitoring

Introduction

COVID-19 Wastewater Analysis

The quick spread of COVID-19 has made testing and isolation of the virus (SARS-CoV-2) a key priority. Wastewater has been shown to carry SARS-CoV-2 viral RNA which can be analyzed and provide qualitative information to approximate the number of infected individuals within an area. A recent study from the Water Research Foundation showed a direct correlation between community infection levels and SARS-CoV-2 RNA concentrations found in wastewater systems. A surveillance tool is critical for this work to be continued requiring rapid, simple and scalable monitoring to continue for various applications.

The ability to rapidly detect and monitor wastewater systems provides communities and companies the ability to create a snap-shot of how to best respond to changing conditions, protect individuals and maintain operations safely.

The FREDsense Approach

Using our rapid analysis sensor platform, FREDsense is commercializing a portable field device for SARS-CoV-2 levels in wastewater. Unlike individual tests, being able to detect the virus in wastewater will provide the necessary data required for public health professionals to determine disease prevalence, the infectivity potential of larger groups of individuals, and support initiatives to maximize the impact of resources available.

Existing efforts do not provide sufficient support for organizations or communities, with analytical lab techniques typically requiring at least 2 days, and often weeks before data is available. FREDsense's Rapid-Detection COVID-19 Test offers results in hours, at less than half the cost of laboratory analysis, while also enabling data-driven recommendations to inform public and private efforts to keep their people safe from future transmission of COVID-19.

FREDsense specializes in field measurement of hard to detect compounds, building sensors using a biologically based platform for low level analysis. The system is designed to detect COVID in a streamlined way where a sample can be processed and analyzed using a portable field measurement system, making it possible for anyone to perform an analysis in close to real-time.

Partners

This work is being supported by a group of researchers, corporate partnerships and developers including **Elemental Excelerator**, a major clean-technology accelerator organization based out of Hawaii and California. FREDsense is partnered with one of the leading providers of wastewater treatment technology and services for **commercialization and distribution** of the system. FREDsense is also partnered with a number of wastewater treatment facilities and third-party testing labs located within Canada for field testing applications.

We are currently in the process of in-lab validation of the testing system for COVID-19 and preparing for rapid field testing in early 2021.

For More Information

We are looking for partner organizations to support commercialization, distribution, piloting and investment into our existing systems.

For more information reach out to David Lloyd, CEO, 587-227-0540 or david@fredsense.com.