



**KRAKEN**  
SENSE

# KRAKEN™

Autonomous Pathogen Detection Platform  
for Fishing & Aquaculture



## Streamlining Microbial Monitoring

Kraken Sense is dedicated to revolutionizing pathogen detection in the fishing and aquaculture industry, making it rapid, effortless, and accessible for all. Unlike traditional microbial testing methods, which often entail waiting for several days, KRAKEN™ empowers you to autonomously assess water quality in as little as 1 hour. Our approach harnesses real-time amplification techniques and cloud-based data processing, ushering in unprecedented speed in pathogen detection. Say goodbye to labor-intensive sample preparation and manual labor – with KRAKEN™, it's a thing of the past. Plus, KRAKEN™ can be programmed for continuous water source monitoring, following your customized schedule. Our system can be effortlessly installed on your premises, be it indoors or outdoors, and conveniently monitored from a distance.

# ELIMINATE LAG TIME & RETAKE CONTROL

# CAPABILITIES



## Autonomous

KRAKEN™ autonomously samples **without any manual preparation**, taking samples at **any set schedule**.



## Specific

KRAKEN™ employs **strain-specific** sensors to accurately detect & quantify pathogens in just **60 minutes**.



## Real-time

Simultaneously monitor **multiple pathogens in real-time**. Results are available as **raw data** and **graphs**.



## Usability

KRAKEN™ is **simple to install**, only requiring power, WiFi/GSM connection, & access to a water line.

KRAKEN™ sensors exhibit exceptional sensitivity to specific bacterial strains and viral variations, exhibiting resilience against background interference from other aquatic constituents. Our system has the capability to simultaneously monitor for numerous pathogens, furnishing precise quantitative data regarding the contamination levels of each individual species, even as low as 1 copy per milliliter (1 copy/mL).

## Detectable Pathogens

Our catalog of available pathogen sensors is always expanding. We are typically able to develop a new target sensor for you in under 6 weeks. We can also measure physical attributes such as redox potential, pH, oxygenation, conductivity, temperature, and more. Our current readily available catalog includes:

- *E. coli* (including O157:H7)
- *Salmonella*
- *Legionella*
- *Listeria monocytogenes*
- *Vibrio*
- *Campylobacter*
- SARS-CoV-2
- Monkeypox
- CrAssphage
- PMMoV



# TECHNOLOGICAL OVERVIEW



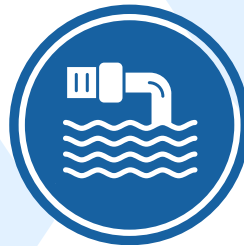
Kraken Sense's commitment to quality extends to our comprehensive in-house manufacturing process, which is meticulously customized to suit the unique demands of your project. Our team of highly skilled microbiologists and engineers collaborates closely to craft a bespoke, all-in-one system tailored precisely to fulfill your project's specifications. Within KRAKEN™, our microfluidic chip undergoes rigorous testing, evaluating an array of targets alongside controls to ensure reliability and accuracy.



KRAKEN™ can be installed in-line with virtually any water source, including water pipes, runoffs, canals, liquid containers, open bodies of water, and more.



Concentrated sample is analyzed using single-use pathogen-specific sensors. Each test takes only 60 minutes to complete. Our refillable cartridges can hold up to 66 single-use sensors.



All processing and analysis are completed within the device. Excess liquid is safe to release back to the source since KRAKEN™ does not grow or cultivate any pathogens internally.



KRAKEN™ only requires power and WiFi or a GSM connection. The results of each test are available via a mobile app or web-based dashboard.

## Each microfluidic chip is customized with an array of relevant target sensors



# CUSTOMER STORY

As Canada's airports returned to full capacity following the COVID pandemic, Kraken Sense had the opportunity of working with the Greater Toronto Airport Authority to conduct wastewater testing at Pearson Airport for Monkeypox and Omicron (SARS-CoV-2 variant) without interrupting passengers or staff.



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[KRAKEN™'s] ability to provide rapid, on-site, automated [sic] pathogen testing has been invaluable to provide us with an early warning to allow us to put mitigants in place for the protection of our passengers and our employees. Its ability to be rapidly deployed, its user-friendliness has allowed our employees to be able to use this equipment quite easily. We are very grateful to Kraken Sense for their ability to work with us, to customize the system to meet the needs of Toronto Pearson [Airport]. And I highly recommend Kraken Sense to any organization out there that is looking to have on-site pathogen testing available.

Dwayne Macintosh

Director of Safety, Security, & Health, **Greater Toronto Airport Authority**



## Kraken Sense works with you on system design and set up



# KRAKEN SENSE

Revolutionizing Real-time Pathogen Detection



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