



KRAKEN
SENSE

KRAKEN™

Autonomous Pathogen Detection Platform
for Pharmaceutical Bioprocessing



ELIMINATE LAG TIME & RETAKE CONTROL

Streamlining Microbial Monitoring

Kraken Sense is committed to revolutionizing pathogen detection in the pharmaceutical bioprocessing industry, making it swift, efficient, and accessible to all. In contrast to conventional microbial testing procedures that often demand several days for results, KRAKEN™ offers the capability to autonomously assess water quality in as little as 1 hour. We harness cutting-edge real-time amplification techniques and cloud-based data analysis to deliver unparalleled speed in pathogen detection, eliminating the need for sample preparation or manual intervention. KRAKEN™ can be configured for continuous monitoring of your critical water sources according to your customized schedule. Our adaptable system can be seamlessly installed at your pharmaceutical facility, whether it's indoors or outdoors, and conveniently monitored remotely.

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

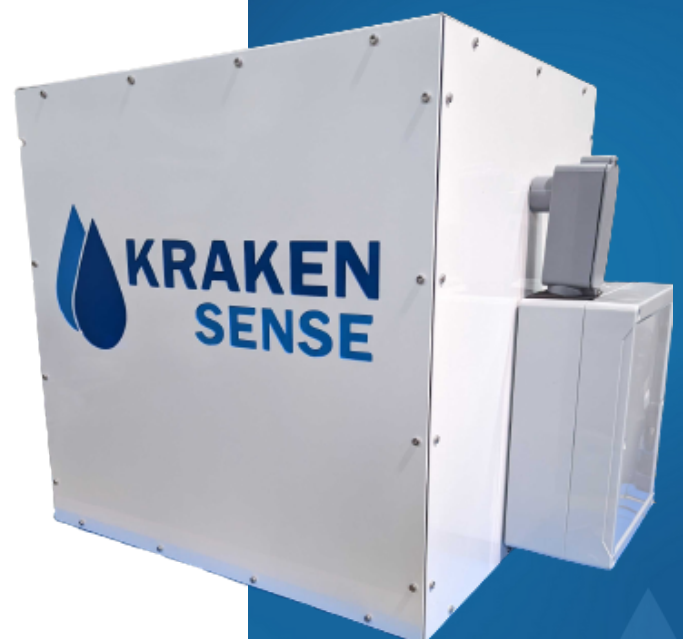
KRAKEN™ is **simple to install**, only requiring power, WiFi/GSM connection, & access to a water line.

KRAKEN™ sensors exhibit exceptional sensitivity to specific bacterial strains and viral variants, effectively mitigating interference from background contaminants in the pharmaceutical bioprocessing environment. Our advanced system boasts the capability to concurrently monitor multiple pathogens, furnishing precise quantitative data on the contamination levels of each species, with detection sensitivity as low as 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



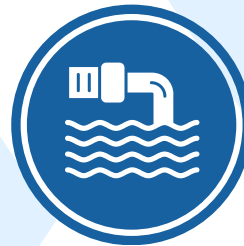
Kraken Sense conducts all manufacturing processes in-house, offering customized solutions that cater to the unique demands of your pharmaceutical bioprocessing projects. Our team of proficient microbiologists and engineers is dedicated to crafting a bespoke all-in-one system precisely aligned with your project specifications. The microfluidic chip within KRAKEN™ systematically assesses an array of targets alongside control parameters, ensuring 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.



[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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