

# **KRAKEN**<sup>™</sup>

Autonomous Pathogen Detection Platform for Cannabis Safety





### Streamlining Microbial Monitoring

Kraken Sense is on a mission to revolutionize pathogen detection within the cannabis industry, making it quick, convenient, and accessible to all. In contrast to traditional microbial testing methods, which often entail lengthy turnaround times, KRAKEN™ enables you to autonomously test cannabis products in as little as 1 hour. We leverage real-time amplification techniques and cloud-based data processing to deliver unmatched speed in pathogen identification. No more need for complex sample preparations or manual labor. With KRAKEN™, you can schedule continuous monitoring of your cannabis production environment. Our system can be easily set up on your premises, whether it's an indoor facility or an outdoor cultivation operation, and conveniently monitored remotely.

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<sup>™</sup> sensors exhibit exceptional sensitivity to specific bacterial strains and viral variants within the cannabis industry, effectively eliminating background interference from other potential contaminants. Our system is designed to simultaneously monitor for multiple pathogens, providing precise quantitative data regarding the contamination levels of each strain (accurate down to 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 0157:H7)
- Salmonella
- Legionella
- Listeria monocytogenes
- Vibrio
- Campylobacter
- SARS-CoV-2
- Monkeypox
- CrAssphage
- PMMoV



## TECHNOLOGICAL OVERVIEW



At Kraken Sense, we handle all manufacturing processes internally, tailoring them to the unique demands of your cannabis project. Our team of expert microbiologists and engineers will work closely with you to create a custom all-in-one system that aligns precisely with your project's specifications. KRAKEN™'s microfluidic chip is adept at testing 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<sup>™</sup> does <u>not</u> 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 cartridge 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<sup>™</sup>'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 customized to your needs



## **KRAKEN SENSE**

Revolutionizing Real-time Pathogen Detection



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