

Greenlight Device Assesses Cannabis

By Avery Mullen | Jun 16, 2020

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Cannabis testing startup Greenlight Analytical is preparing to launch a device that will measure the quality of cannabis crops without the need for slow and costly lab testing.

CEO James Wylde said in an interview that the product will be a modified mass spectrometer -- a machine that analyzes the chemical composition of substances and lists their contents -- paired with an AI system that will translate the spectrometer's output into an easily understandable format.

“The user puts a bud in, closes the door, presses a green button, and that’s it,” said Halifax-based Wylde. “A couple minutes later, they get very human-readable results.”

Cannabis growers usually rely on lab-testing to check the health and chemical contents of their product. Wylde said that, as with all agriculture, trait variation in plants can occur naturally.

But regulators in Canada and the United States require legitimate growers to track the makeup of their products, and certain traits cause buds to sell for higher prices. Sending marijuana to labs for testing usually takes multiple weeks, which means that by the time growers find out about a problem with their crops, it may be too late to correct the issue.

Testing cannabis crops on-site has the potential to offer a much faster solution, but mass-spectrometers usually require complex, multi-step processes to prepare samples to be analyzed, Wylde said. The procedures are time-consuming and error prone, even when carried out in professional laboratories, and the results are presented in a format that requires special training to interpret.

Wylde said his company's product will address these problems by removing the need for sample preparation and presenting key results, such as THC content, in a format that can be understood by non-chemists.

A prototype of the device has been completed and tested, and the AI is undergoing continued development as part of a partnership with Acadia University.

Greenlight hopes to take the device to market within five or six months, provided that an ongoing, \$750,000 funding round is finished in time.

Wylde himself holds a PhD in mechanical engineering, and has worked at other companies that commercialized mass spectrometer technology. He now heads up a team of five people.

When they launch their device, the team will initially target licensed cannabis growers in Canada, before expanding into the United States. Revenue will come from a combination of equipment sales and recurring subscription fees for services such as software updates and maintenance.

Wylde said the fundraising process has been aided by Atlantic Canada's tight-knit startup community.

He decided to move Greenlight from outside Ottawa to Nova Scotia in 2019, after becoming frustrated by a lack of cohesion in the local startup ecosystem.

In Greenlight's region of Ontario, the economy was driven largely by a combination of the local military base and the nuclear energy sector, with little in the way of institutional support for innovative companies, he said. When he spoke to perspective funders, he found that there was little communication or coordination between investors and support organizations.

“The attitude in the area that we were in was that, if what we were pitching wasn't right for them, they would just say no,” he said. “Which is fine. We're not for everybody, and not every investor is going to be attracted to someone like us.”

But in Haliux -- where he and his team are now based out of the Emera ideaHUB - - Wylde has found the ethos of the local startup community to be more helpful and collaborative.

“People would say, ‘You're not really right for us, but you might be right for this particular group and I'll make a warm introduction for you,’” he said. “We're a small economy out here. We can't afford a lot of the dedicated incubator space like some areas can, but the local community does a very, very good job of partnering.”