

GemmaCert[®]

Smart
Cannabis
Analysis



GemmaCert® - *Be Certain.*

We're inspired by growers, value-added producers, wholesalers, retailers, and all the wonderful people along the cannabis value chain. We promote value and manage risk by bringing confidence, reliability, and efficiency to cannabis quality assurance for the benefit of consumers and patients everywhere.





Why GemmaCert®?

Growers, value added producers, wholesalers and retailers can use GemmaCert for:

- ✓ Accurate potency analysis
- ✓ Superior quality control
- ✓ Price validation
- ✓ Promoting consumer confidence
- ✓ New product development
- ✓ Crop optimization

“We hope that GemmaCert will set the global standard for cannabis quality assurance for the benefit of consumers and patients everywhere.”

–Dr. Guy Setton, Founder & CEO, GemmaCert

“How do I know the cannabis I buy from the grower is worth the premium I pay? I have no means to validate cannabis potency on the spot.”

–Dispensary Manager, California

“I never know if the cannabis I buy is right for me. Sometimes I get cannabis which causes me anxiety and I cannot fall asleep. I wish the labels were as accurate as all other medications”

–Cancer patient, Israel

The GemmaCert Advantage®

- No sample preparation or destruction
- Simple-to-use and operate
- Quick results for real-time screening
- Total control and operating via smartphone
- Eco-friendly and no need to use chemicals
- Cost-effective and efficient
- No results interpretation needed
- Automatic calibration



What technology does GemmaCert® utilize?

GemmaCert's propriety solution incorporates spectroscopy, image analysis and advanced data analytics.

What does GemmaCert® analyze?

GemmaCert tests for Total THC & Total CBD in dry flower buds. GemmaCert users will continue to receive upgrades via secure cloud-based servers, improving performance and adding new capabilities, covering additional cannabinoids, moisture and water activity analysis, as well as oil extract examination for the competence of testing and calibration laboratories.

"With GemmaCert we saved 18% on our latest purchase of cannabis flowers. Our supplier claimed the flowers he delivered had a THC level of 22% but with GemmaCert we tested flowers on the spot and discovered that the THC level was 16%. We bought the flowers for EUR 18,000 instead of the original asking price of EUR 22,000."

-Coffeshop Manager, Amsterdam





GemmaCert® Performance

When it comes to accuracy, GemmaCert achieves an RMSE of 1%. Therefore, if a sample has a known result of 10% then the GemmaCert analysis will yield a result within the range of 8% to 12%.

GemmaCert's performance is based on the application of complex mathematical techniques and advanced data analytics.

GemmaCert benefits from its exclusive access to the world's largest proprietary database of cannabis flower spectral readings, collected in compliance with the general requirements expected from testing and calibration laboratories, and which continues to grow daily.

We will provide documentation to support its testing procedures to support the declared performance criteria.

"Every lab we've gone to has been different; there's no standardization. We have seen a variance in THC test results of up to 30 percent from one lab to another. We want to trust that we're giving healthy and clean medicine to people, and at the same time it's been really horrific. How do you trust anything?"

-CEO of a Value-Added Producer, California

"How do I know the cannabis I buy from the grower at a premium is really worth the premium? I have no means of validating the potency of the cannabis."

-Dispensary owner, Washington



How does GemmaCert® compare to an HPLC?

Most analytical methods, including the industry's "gold standard" HPLC (High Performance Liquid Chromatography), estimate by comparing certain measured characteristics to a reference. The result you get from an HPLC is an estimation. It is as good as the chemical standards used, the accuracy (calibration) of the device itself, the testing protocol used, and, of course, the skill of the operator and their interpretation of the results.

It should not come as a surprise that you can get a wide range of results for samples taken from the same batch and sent to multiple professional labs. Each lab uses a different device, operated by different technicians, using their own testing protocols.

GemmaCert better addresses the high potency variance common to cannabis due to its ability to quickly run multiple tests.

A representative assessment of potency with multiple tests is more relevant to quality control than a highly-accurate test from a single specimen.

It's about batch consistency, not only single flower accuracy.

TECHNICAL INFORMATION AND SPECS:

Purpose: Cannabis Analysis.

Results: Total THC and Total CBD.* **

What products does it test: Dry flower buds.
(Future upgrades will test for ground flower buds and cannabis oil.)

What technology does it use: NIR Spectroscopy, Image Analysis and Data Analytics.

How long does an analysis take: Between 2 to 4 minutes.

Is any sample preparation required: No.

Sample usability after testing: Nondestructive testing – sample left intact after analysis.

Calibration requirement: Automatic. Before analysis and no user input required.

User interface: Android Smartphone; iOS coming soon.

Components: Spectrometer, Illumination, Camera, Motion System, Control and Communications Module.

Accuracy: The result has an accuracy of 1% RMSE.

Portability: Portable desktop unit.

Connectivity: Bluetooth.

Power source: 6vdc by standard 110/220 ac2dc power supply.

Storage temperature: -10c to +45c (14F - 113F).

Operating temperature: +10c to +35c (50F - 95F).

Dimensions: Height 224mm; Diameter top 144mm; bottom 166mm.

Weight: 1958g (including power supply).

Regulatory compliance: CE , UL , ROHS.

Maintenance: Dispose of bud particuls.

Warranty: First year free. Applies to electronic, mechanical and optical failures not related to physical damage because of device mishandling.

* Total THC = 0.877 THCA + Δ 9THC; Total CBD = 0.877 CBDA + CBD.

** Analysis of additional cannabinoids and moisture with upcoming software updates.



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For more information, or media and marketing questions, please contact:

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