Legalization of Cannabis Products

As of July 2017, over 20 European countries have legalized cannabis for medical use and more are expected to follow in the coming years. While possession of cannabis is still illegal by federal statutes, there is an ongoing debate concerning legalization of medical and recreational cannabis. Demand of cannabis testing and analytical tools is therefore growing.

QC testing for accurate labeling of cannabis products
Numerous health benefits have been reported for cannabis, including general pain reduction, anti-nausea, reduction of seizures and autism. QC testing for cannabinoids is essential for accurate labeling of cannabis products both in medical and recreational cannabis markets.

• Cannabinoids are the primary active components of cannabis, so these are target compounds for potency testing
• Terpenes influence the homeopathic effect
• Pesticide residues in cannabis plants need to be controlled to ensure consumer safety.

Customized solutions for cannabis analysis
Shimadzu offers a wide range of analytical equipment and provides appropriate configurations and application support for cannabis analysis, including sample preparation. Please check our customized solutions and feel free to contact us for more information according to your needs.

Excellence in Science

Shimadzu; one of the world leaders in analytical instrumentation, provides outstanding solutions for research, development and quality control in a variety of market segments such as food, beverages and agriculture, pharmaceutical, clinical, environmental, chemical, petrochemical, biofuel and energy, plastics and rubber.

Our high-level, sophisticated product range includes Gas as well as Liquid Chromatography, Ultra-Fast Mass Spectrometry, Spectroscopy, Particle Size Analyzer, Life Science Lab Instruments, Total Organic Carbon Analysis (Sum Parameters), Material Testing and Measuring Technology.

"Excellence in Science" reflects our desire and attitude to respond to customer requirements by offering superior, world-class technologies.

For more information regarding cannabis analysis and application support for quality control, please contact us:

⊕ **SHIMADZU**

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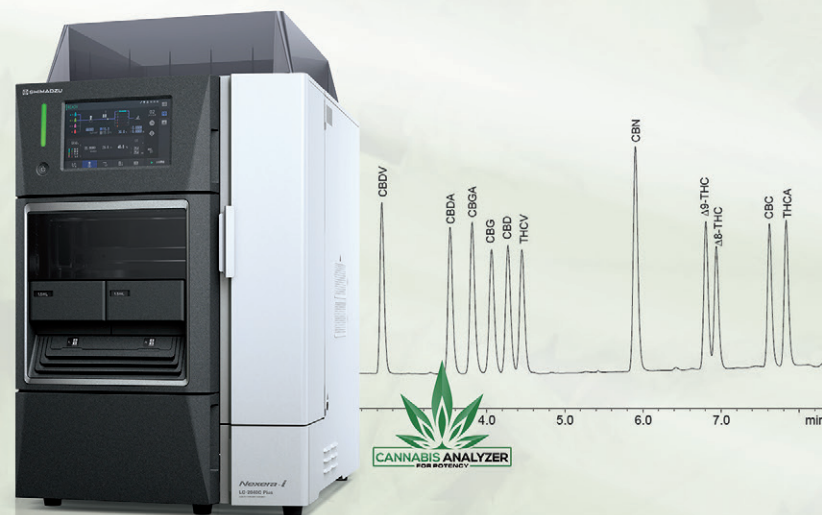Excellence in Science

Customized solutions for cannabis analysis

Guaranteed quality of cannabis products for medical use, from seed to store

Cannabis Analyzer for potency testing
Fast, easy-to-use solution

Cannabis "potency" is normally determined by quantitation of the major cannabinoids, including THCA, THC, CBD and CBN. The i-series HPLC analyzer for potency testing of cannabis products supports the need for fast, high-sensitivity determination of these primary active components of cannabis. It offers a simple procedure, complete with a column, methods, batches and report templates. This solution system covers sample submission to reporting in just a few mouse clicks, with easy and minimal workflow even for less experienced analysts.

Terpene profiling by GC-MS
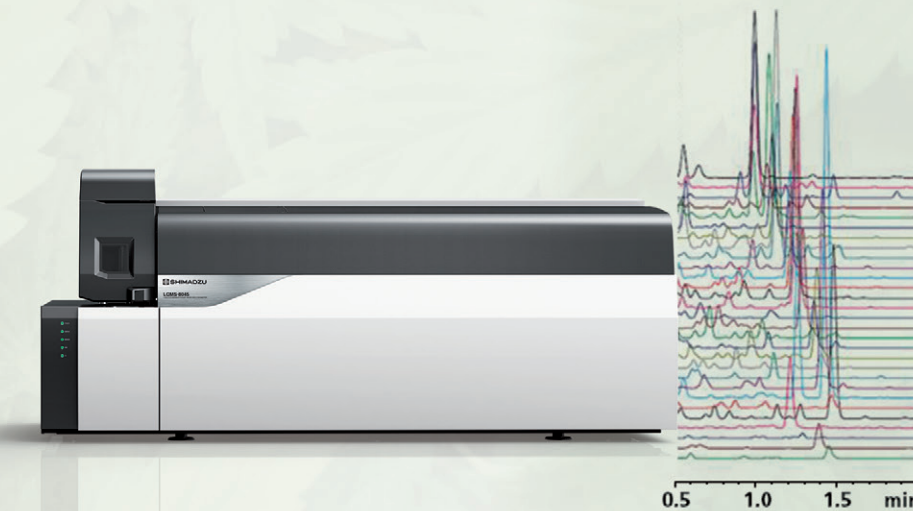# Easy identification and characterization

Terpenes are produced in trichromes (where THC is generated) and give cannabis its distinctive flavor and aroma. Terpenes also act as essential, medicinal hydrocarbon building blocks, influencing the overall homeopathic effect. From the pine odor of pinene to the citrus-like smell of limonene, the characterization of terpenes and their synergistic effect with cannabinoids is achieved easily using Shimadzu gas chromatography.

The Shimadzu GCMS-QP2020 with HS-20 Headspace Sampler and FFNSC 3 library is the ultimate platform for terpene analysis. It identifies more than 3,000 flavor and fragrance compounds easily, to meet your terpene profiling needs.

Pesticide Screening by LC-MS-MS
Most sensitive detection

Pesticides are used in commercial cannabis growing operations to kill insects and pests that thrive on cannabis plants. Pesticides may be carcinogenic and mutagenic, causing serious harm to consumers, especially immuno-compromised medicinal cannabis users. Shimadzu offers the most extensive and sensitive pesticide screening and confirmation available, utilizing Liquid Chromatography-Mass Spectrometry (LC-MS).

Offering excellent sensitivity and throughput, the ultra-low detection limits provided by Shimadzu LC-MS make this technique ideal for the analysis of pesticides commonly employed during cannabis cultivation.