

[TOTAL ANALYTICAL WORKFLOW SOLUTIONS]

CANNABIS AND HEMP

QUALITY AND SAFETY TESTING



Waters

THE SCIENCE OF WHAT'S POSSIBLE.™

Establish Confidence, Assurance, and Agility

Quality and safety are of paramount importance for cannabis and hemp industries. Reliable and robust instrumentation, workflows, and data management systems are the keys to success in differentiating and succeeding in this rapidly changing market. With award-winning technology, deep roots in regulatory compliance, and unmatched application support, our customers have the tools and confidence to build and grow their laboratory operations.

Agile. Confident. Compliant. Grow your business with a trusted partner.

“Instrumentation is the most critical component of our business. Waters equipment is a foundational portion of our testing platform”

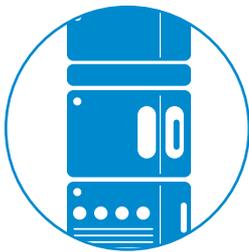
DR. CHRISTOPHER HUDALLA

ProVerde Laboratories, Inc Co-Founder and CSO





A TOTAL SOLUTION FOR CANNABIS QUALITY AND SAFETY TESTING



ACQUITY UPLC-UV

Potency/Profiling
Cannabinoid Analyzer



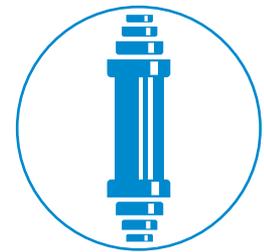
UPLC-MS/MS

LC pesticides
Mycotoxins



GC-MS/MS

GC pesticides
Terpenes
Residual solvents



CHEMISTRIES & CONSUMABLES

Columns and vials
Sample prep and standards



SOPs

Startup guides
Assisted implementation
Field technical support



SOFTWARE/ INFORMATICS

Customizable reporting
Compliant data management



SOLUTIONS FOR

Sample homogenization
Heavy metals testing
Moisture analysis
qPCR



FINANCING

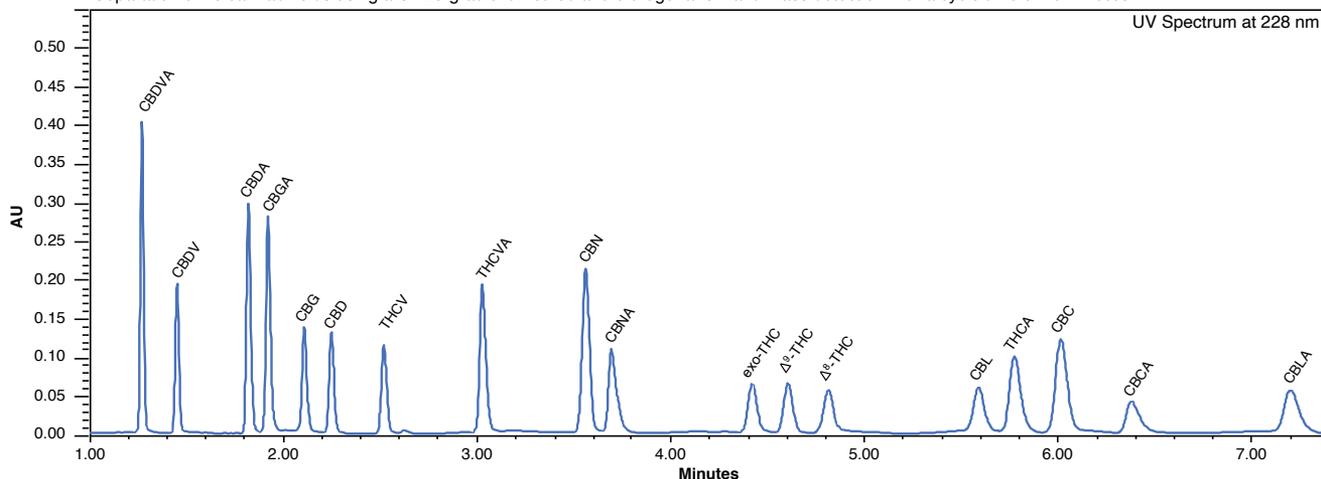
Single-source solution
Asset management

Potency Testing and Cannabinoid Profiling— Cannabinoid Analyzer Solution

- Separate and quantify 18 cannabinoids in under 10 minutes using UPLC with UV and optional mass detection for fast turn-around times and less solvent usage
- Characterize cannabinoid content in complex mixtures like flower, extracts, foods, beverages and other derived products
- Use UPC²™ to distinctly separate cannabinoid isomers for the highest accuracy and confidence

KEY SOLUTIONS: UPLC | HPLC | UPC²

Separation of 18 cannabinoids using a UPLC gradient method and orthogonal UV and mass detection with a cycle time of 10 minutes.



Featured chemistry products:

[CEN QuEChERS salts, p/n 186006813](#)

[Certified vials, p/n 186005668CV](#)

[Syringe filters, p/n WAT200556](#)

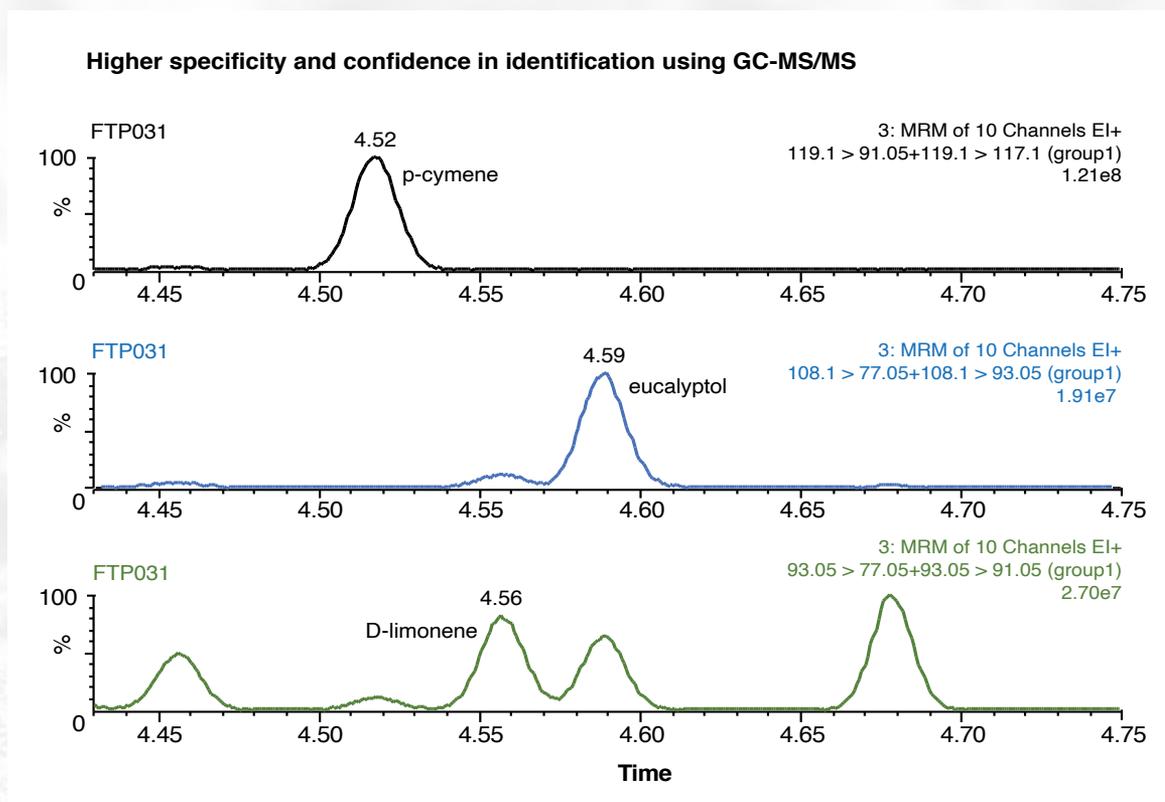
[CORTECS C₁₈, 1.6 μm, 2.1 mm x 150 mm, p/n 186007096](#)

[Literature code: 720007199](#)

Terpene Profiling and Analysis

- Characterize the aroma profile of cannabis products
- Greater confidence in compound ID with tandem-MS
- Can be performed on the same MS as residual solvent testing, reducing cost and bench space needs

KEY SOLUTIONS: EI GC-MS/MS | APGC-MS/MS



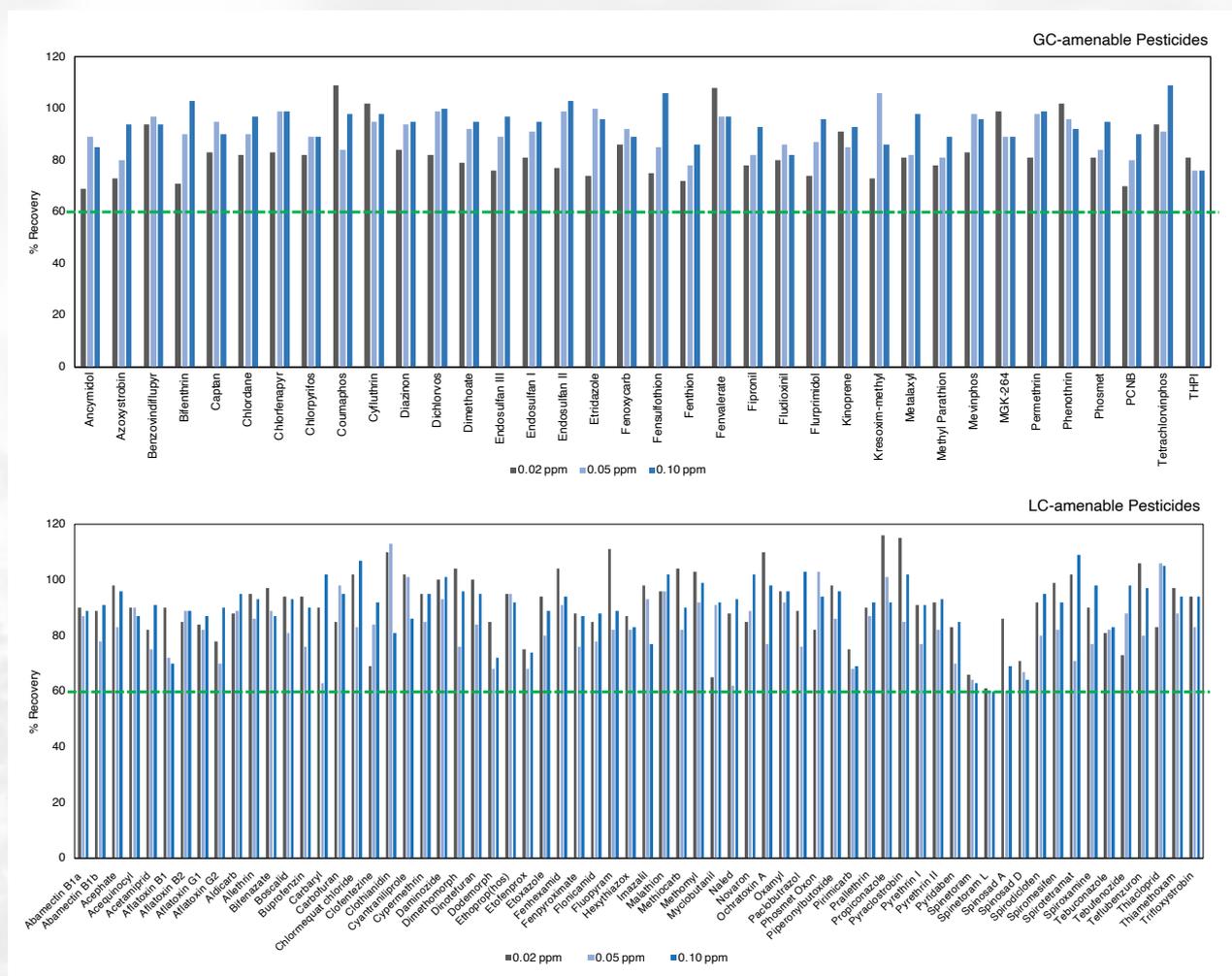
Featured chemistry products:
[Certified vials, p/n 186005668CV](#)
[Syringe filters, p/n WAT200556](#)

[Literature Code: 720006781EN](#)

Trace Detection of Pesticides

- Quantify pesticides below current levels set by AOAC International and by specific regions
- Download pre-optimized methods for LC and GC pesticides for free from Waters Marketplace
- Improve data quality with Waters' simple extraction procedure and sample cleanup solutions
- Simplify user training by employing a single software platform for both LC and GC-MS/MS systems

KEY SOLUTIONS: SPE | LC-MS/MS | GC-MS/MS

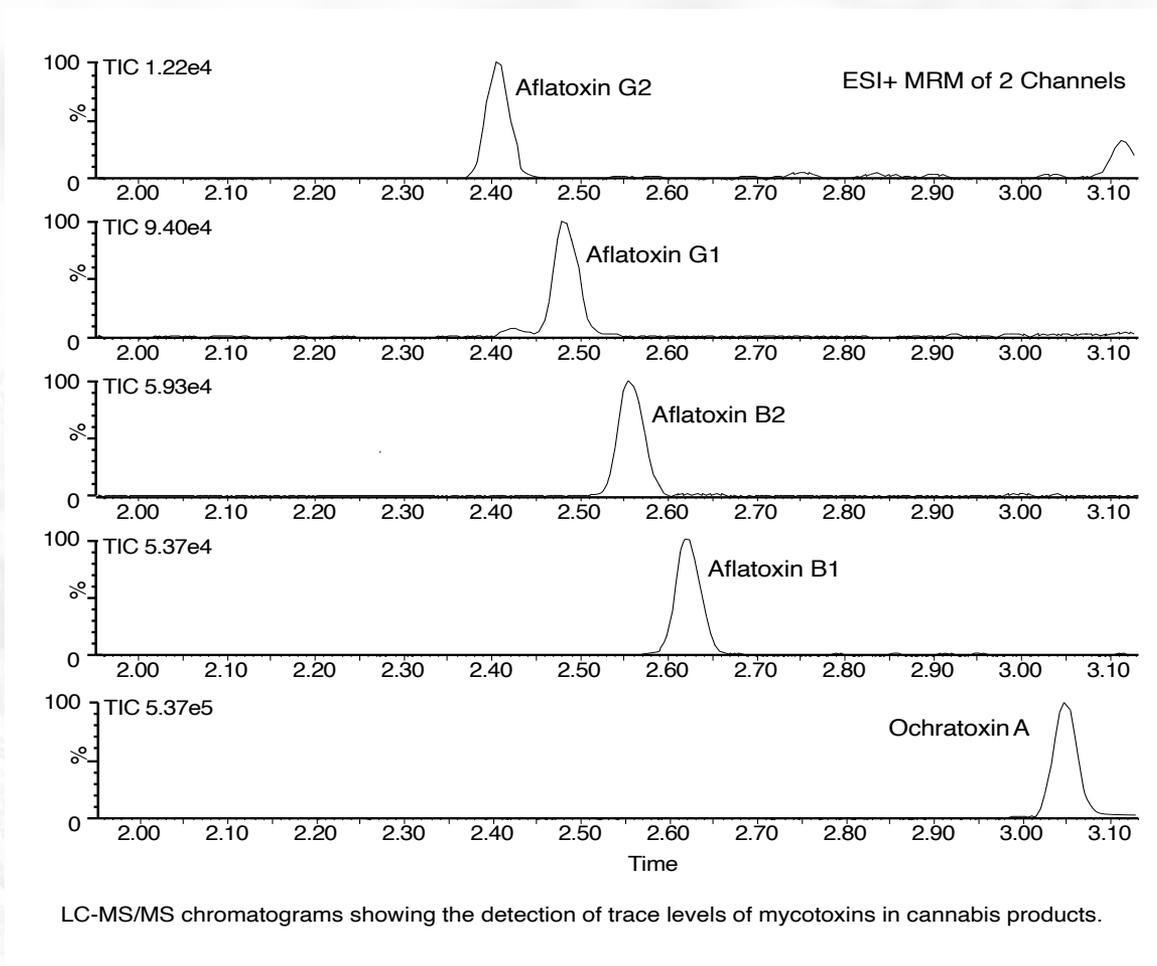


Featured chemistry products:
[Certified vials, p/n 186005668CV](#)
[Syringe filters, p/n WAT200556](#)
[Oasis PRiME HLB \(3cc, 150 mg\), p/n 186008717](#)
[XBridge BEH C₁₈ XP, 2.5 µm, 2.1 mm x 150 mm, p/n: 186006709](#)
[Literature Code: 720006780EN](#)

Accurate Mycotoxin Detection

- Immunoaffinity columns effectively concentrate analytes of interest for sensitive detection
- Can be performed on the same MS as pesticide testing, reducing cost and bench space needs
- Applicable for various sample types

KEY SOLUTIONS: LC-MS/MS



Featured chemistry products:

[AflaOchra immunoaffinity columns, p/n G1017](#)

[Certified vials, p/n 186005668CV](#)

[XBridge BEH XP C₁₈, 2.5 μm, 2.1 mm x 100 mm, p/n 186006031](#)

[ACQUITY UPLC BEH C₁₈ VanGuard Pre-column, 1.7 μm, 2.1 mm x 5 mm, p/n 186003975](#)

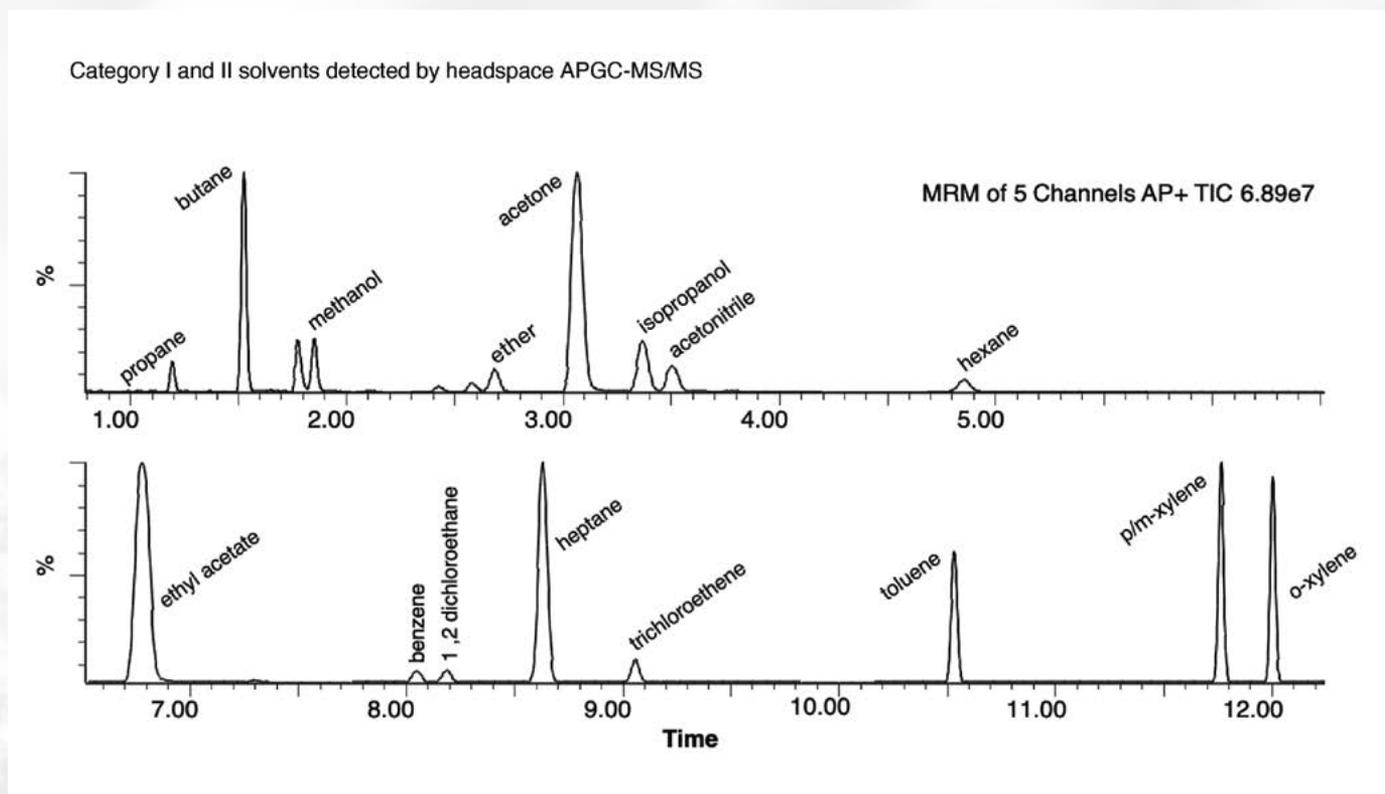
[Literature Code: 720007096EN](#)

[720006780EN](#)

Residual Solvent Quantitation

- Ensure compliance with health and safety regulations
- Minimize sample preparation with automated headspace sample introduction
- Can be performed on the same MS as terpene testing, reducing cost and bench space needs

KEY SOLUTIONS: GC-MS/MS | APGC-MS/MS



[Literature Code: 720007150](#)

Liquid Handling Automation to Increase Efficiency

Laboratory automation with Andrew Alliance allows scientists to develop reproducible, traceable, and easily implemented sample preparation protocols through highly repeatable pipetting. When using OneLab, a cloud-native software environment, experiments can be intuitively designed, reproducibly executed and tracked through a rapidly evolving ecosystem of connected devices and accessories.

- Easy to learn, use, and program without the need for high-level technical expertise
- Effortlessly transition from repetitive pipetting procedures to fully robotized lab workflows
- Improve accuracy and reduce variability for added confidence in data

KEY SOLUTIONS: Pipette+ | Andrew+

Pipette 
easy pipetting



Andrew 
the pipetting robot



waters.com/automate

Waters™


Andrew Alliance
A WATERS COMPANY

Elevate Your Quality with Compliance-ready Software

ELEVATE YOUR QUALITY

Empower™ Chromatography Data System (CDS) helps you achieve the highest quality results in your laboratory. With a suite of flexible functionality that grows to meet your changing needs, Empower is easily scalable from a single workstation to an enterprise-wide network, where you can work at the bench, across sites, and even remotely with on-premise or cloud options. In an Empower environment, records are traceable so you always have full control of your data. Save time, automate tasks, and eliminate data vulnerability with Empower. You don't have to settle for less when it comes to the quality of your data.



COMPLIANCE WITH REGULATIONS AND QUALITY REQUIREMENTS

Having the Electronic Record (i.e., 21 CFR Part 11, ISO 17025) capabilities and compliant electronic signatures you need for your quality is elevated to an all new level with the data integrity, advanced security, and audit trails in Empower.

SIMPLIFIED MASS SPECTROMETRY

Acquire, analyze, manage, and share mass spectrometry information - Waters' MassLynx Software improves your MS system with its intuitive interface, intelligent instrument control, and software features built to transform data into usable results. Quanpedia for MassLynx™ Software has been developed as part of integrated workflow innovations for laboratories, providing searchable and customizable databases of LC-MS/MS and GC-MS/MS methods to accelerate method development and adoption.



CENTRALIZED DATA MANAGEMENT

Simplify your laboratory workflows and data management needs, regardless of scientific and regulatory complexity, by implementing Waters™ NuGenesis™ Lab Management System (LMS). This system uniquely combines synergistic data, workflow, and sample management capabilities to support the entire product life cycle from development, manufacturing to regulatory testing. Nugenesis seamlessly links data such as sample submission and results review, stability testing, multi-vendor software connection, laboratory inventories, and data retention. Easily connect and compile data from all printable sources to accelerate decision-making, improve compliance, and maximize efficiency across your global operations.

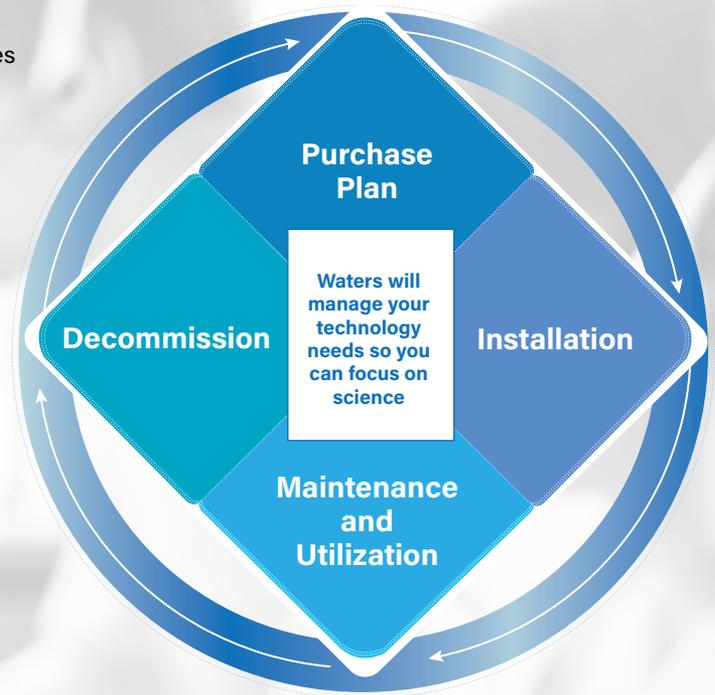


Waters Capital Financing Solutions

Waters Capital provides solutions to help you access the equipment you need to grow your operations with the security of preferred payment terms to preserve and protect your capital for the future.

HIGHLIGHTS

- **Optimize use of capital resources**
 - Maximize access to new technology with competitive rates
 - Leverage vendor financing to manage asset lifecycle
- **Improve cash flow forecasting**
 - Manage large acquisitions with predictable monthly payments
- **Speed up your Return on Investment**
 - Monthly payments begin after installation
 - ROI calculation based on monthly payment amount
- **Direct funding through technology partner**
 - Waters self-funds as a resource to our customers



www.waters.com/cannabis

For your local sales
office, please visit
waters.com/contact



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