

# Streamline key market access for the legal cannabis and cannabinoid industry

Delivering comprehensive safety, security and sustainability services



**Empowering Trust<sup>®</sup>**

[UL.com/Cannabis](https://www.ul.com/Cannabis)

Your cannabis business, like the industry, is constantly evolving. In an emerging market, change can affect the safety and security of your facilities and employees and make it a challenge to deliver consistent product quality, all while continuing to meet numerous regulatory requirements.

UL is experienced in managing uncertainty in emerging markets by providing a full portfolio solution including advisory services, testing, certification, inspection, audit and training to a wide variety of industries.

We now provide the legal cannabis market access to this complete set of service solutions across the entire supply chain. From facility audits to cybersecurity assessments to employee health and safety training, UL services help inform and protect your business. In addition, we work with manufacturers to inspect and certify the products you use in your operation where safety and security is paramount.

## UL and the cannabis supply chain

	 <b>Grower</b>	 <b>Producer</b>	 <b>Distributor</b>	 <b>Retailer</b>
<b>Building, facilities and equipment</b>	<ul style="list-style-type: none"> <li>• Cannabis facility audit</li> <li>• Fire and security alarm certification</li> <li>• Building inspections</li> <li>• Security/video inspections</li> <li>• Fire containment and suppression testing and certification</li> <li>• Safe and vault inspections</li> <li>• Horticultural lighting testing and certification</li> <li>• HVAC equipment testing and certification</li> </ul>	<ul style="list-style-type: none"> <li>• Cannabis facility audit</li> <li>• Fire and security alarm certification</li> <li>• Building inspections</li> <li>• Security/video inspections</li> <li>• Fire containment and suppression testing and certification</li> <li>• Safe and vault inspections</li> <li>• Horticultural lighting testing and certification</li> <li>• HazLoc and ordinary locations plant oil extraction equipment systems, booths and industrial processing testing and certification, evaluation of pre- and post-process extraction systems</li> <li>• HVAC equipment testing and certification</li> </ul>	<ul style="list-style-type: none"> <li>• Fire and security alarm certification</li> <li>• Security/video inspections</li> <li>• Safe and vault inspections</li> </ul>	<ul style="list-style-type: none"> <li>• Cannabis facility audit</li> <li>• Fire and security alarm certification</li> <li>• Building inspections</li> <li>• Security/video inspections</li> <li>• Fire containment and suppression testing and certification</li> <li>• Safe and vault inspections</li> </ul>
<b>Employee health and safety</b>	<ul style="list-style-type: none"> <li>• Cannabis facility audit</li> <li>• Employee health and safety online training</li> </ul>	<ul style="list-style-type: none"> <li>• Cannabis facility audit</li> <li>• Employee health and safety online training</li> </ul>	<ul style="list-style-type: none"> <li>• Cannabis facility audit</li> <li>• Employee health and safety online training</li> </ul>	<ul style="list-style-type: none"> <li>• Cannabis facility audit</li> <li>• Employee health and safety online training</li> </ul>
<b>Environmental health</b>	<ul style="list-style-type: none"> <li>• Smart building solutions</li> <li>• Indoor air quality inspection and certification</li> <li>• Near and zero waste validation</li> </ul>	<ul style="list-style-type: none"> <li>• Smart building solutions</li> <li>• Indoor air quality inspection and certification</li> <li>• Near and zero waste validation</li> </ul>	<ul style="list-style-type: none"> <li>• Smart building solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Smart building solutions</li> </ul>
<b>Technology</b>	<ul style="list-style-type: none"> <li>• Cyber security assessment services</li> </ul>	<ul style="list-style-type: none"> <li>• Cyber security assessment services</li> </ul>	<ul style="list-style-type: none"> <li>• Cyber security assessment services</li> </ul>	<ul style="list-style-type: none"> <li>• Cyber security assessment services</li> </ul>
<b>Cannabinoid product quality and safety</b>	<ul style="list-style-type: none"> <li>• Potency and contamination testing for hemp</li> <li>• cGMP/GPP audits</li> </ul>	<ul style="list-style-type: none"> <li>• Hemp-derived cannabinoid product testing</li> <li>• cGMP/GPP audits</li> </ul>	<ul style="list-style-type: none"> <li>• Hemp-derived cannabinoid product testing</li> </ul>	<ul style="list-style-type: none"> <li>• Potency and contamination testing for hemp</li> <li>• cGMP/GPP audits</li> <li>• Food sanitation audits</li> </ul>

## How can UL help with safety, security, and sustainability?

UL offers a **cannabis facility audit**, based on the very first national Standard for the cannabis industry – **CAN/ULC-S4400**, the Standard for Safety of Premises, Buildings and Equipment Utilized for the Cultivation, Production and Processing of Cannabis.

CAN/ULC-S4400 was developed specifically for the legalized cannabis industry.

This Standard provides guidance regarding the safety and security of buildings, facilities and equipment utilized in the growing, processing/extracting, distribution and selling of legal cannabis. It contains three parts:

1. Describes the minimum level of protection and safety for occupants, buildings and facilities, fire protection requirements, and the means of egress.
2. Outlines minimum requirements for devices, equipment and systems to address risks of fire, electric shock, injury to persons and explosion.
3. Defines minimum requirements for securing premises from burglary, theft, and trespassing as well as considerations for secure access and safe egress.

UL's cannabis facility audit service is a holistic audit of your buildings, facilities and the equipment used within to assess the safety and security of these areas – regardless of where you fit in the cannabis supply chain.

Our team will partner with your organization to conduct a complete, comprehensive audit of these areas and provide recommendations to address any gaps in compliance to federal, provincial/state or local regulations



## CHOOSE UL

Businesses, consumers and regulatory authorities around the world recognize the trusted rigor and technical excellence of UL certifications and the UL Mark. When you need equipment, tools or service you can trust, look for the UL Mark!



We work with manufacturers around the world to certify their products that can be used in the legal cannabis supply chain:

- Horticultural lighting – certified to UL 8800, the Standard for Horticultural Lighting Equipment
- Fire suppression systems
- Security systems

To find UL certified products for your operation, please see our certification information in Product iQ™ at

[productiq.ul.com](http://productiq.ul.com).



### If you're involved with **GROWING**...

UL can help you with the safety, security, and sustainability aspects of your buildings, facilities and their environments so you can stay focused on your day-to-day operations. Services offered include:

#### **Horticultural luminaires, lighting components and grow systems testing**

UL 8800 represents the first set of standardized requirements specifically designed for horticultural lighting equipment. Scope includes safety considerations around the photobiological safety and effects of ultraviolet (UV), deep blue and infrared (IR) wavelength regions, wiring and connection methods, environmental considerations, ingress protection, and UV exposure of polymeric materials.

#### **Indoor air quality certification**

Indoor air quality certification provides reasonable measures to detect recognized and common sources of indoor air quality problems where they occur. It addresses moisture, airborne volatile organic compounds (VOCs), airborne particulate matter (PM), integrated pest management (IPM) and other aspects of indoor air quality. The program also provides reasonable measures to detect recognized and common sources of indoor air quality problems where they occur. Once certified, you receive the UL GREENGUARD® Certification Mark.

#### **Worker health and safety advisory and training**

Over 1,000 online employee training courses (many available in multiple languages) offer a comprehensive suite of health and safety topics. UL's online training content is created by industry subject matter experts and adult learning specialists to provide an engaging learning experience. All content can be customized with company branding, job-specific content, and more.

#### **Cybersecurity system testing**

It is imperative that life safety and physical security systems be evaluated for cybersecurity to help ensure performance, reliability, prevent damage to assets, mitigate risk, improve security, and maintain health and safety.

#### **Hemp plant testing**

Producing compliant, top quality hemp free from contaminants should be every hemp cultivator's priority. UL's ISO 17025 registered lab offers full analytical and microbiological testing capabilities utilizing recognized methods to ensure accurate, reliable results you can trust. Tests include cannabinoid profiling and potency, terpene profiling, heavy metals and pesticides, microbial, mycotoxins, moisture content, and filth.

#### **Current Good Manufacturing Practices (cGMP)/Good Production Practices (GPP)**

UL can help provide cannabis industry stakeholders with visibility into their supply chains through quality audits to ensure end products meet proper standards and requirements.



## If you're involved with **PRODUCING/PROCESSING...**

Your operation is focused on the science of the industry, which brings its own unique challenges. While still focusing on your building and facilities you need to concentrate on the equipment and operating processes that make your business successful. Services offered include:

### **Plant oil extraction equipment testing and certification**

The extraction process creates hazardous conditions due to flammable solvents, including hydrocarbons, being released during processing. Explosions and fires at cannabis processing facilities are sending workers to the hospital with severe burns which demonstrates the emerging industry's need for proper safety standards. Achieving certification to UL 1389, Standard for Plant Oil Extraction Equipment for Installation and Use in Ordinary (Unclassified) Locations and Hazardous (Classified) Locations, manufacturers can design and manufacture new processing equipment according to this consistent set of criteria and thereby avoid delays in the building permit process. UL offers safety certification of plant oil extraction systems, including extractors, booths/pods, preparatory equipment and post processing equipment.



### **Cannabinoid product testing**

The rise in popularity of hemp-derived cannabinoid products has sparked an unfamiliar challenge in the industry. The uncertainty of rules and lack of regulatory standards combined with record levels of new manufacturers entering this space has led to significant concerns regarding identity, purity, potency and contaminants, putting the health and safety of the consumers at risk. UL's state-of-the-art laboratory is ISO/IEC 17025:2017 accredited and registered with the FDA and DEA. It has complete analytical, microbiological, physical, shelf-life and performance testing capabilities for a wide range of cannabinoid products. We use recognized test methods to help verify that your cannabinoid products are pure, meet specifications, and are compliant with applicable regulations

## **CHOOSE UL**

Businesses, consumers and regulatory authorities around the world recognize the trusted rigor and technical excellence of UL certifications and the UL Mark. When you need equipment, tools or service you can trust, look for the UL Mark!



We work with manufacturers around the world to certify their products that can be used in the legal cannabis supply chain:

- HazLoc and ordinary locations plant oil extraction equipment systems, booths and industrial automation testing and certification, evaluation of pre- and post-process extraction systems
- HVAC/R equipment
- Fire suppression systems

**To find UL certified products for your operation, please see our certification information in Product iQ™ at**

**[productiq.ul.com](https://productiq.ul.com)**



## If you're involved with **DISTRIBUTION**...

Unlike the distribution of other goods within a supply chain, the movement of cannabis and cannabinoid is scrutinized at multiple levels. Whether transporting goods between facilities or importing/exporting, your focus is on the security of your product and the safety of employees. Look for equipment and services that recognize UL's leadership in certifying life safety products:

### Fire and security systems

Our Fire and Security solutions program sets minimum standards for the installation and servicing of an alarm system, which helps facilitate a fair bidding process for alarm companies and alarm system subscribers.

### Managed video monitoring

Our Managed Video Monitoring Services covers security services provided by monitoring stations that monitor video cameras and related equipment installed to form all, or part of, an electronic security system at a protected property.

### Fire resistance products

Our solutions also help confirm the safety, performance, reliability and security of your fire-resistant rated designs. Fire-resistance rated designs are used to achieve code compliant installations where the building codes require hourly rated designs.



## If you're involved with **RETAIL**...

"Retailers that are able to secure the supply chain, protect and analyze customer data, and promote public health and safety will be well positioned to achieve a competitive advantage." Physical retail locations need effective, visible physical and cyber security measures to instill trust. Online retailers require a clear cyber security plan to ensure customers are confident ordering your cannabis products from your website. Services offered include:

### Cybersecurity gap assessment

Our cybersecurity experts can conduct a cursory review of your product or system to identify critical issues and provide requisite guidance and direction for mitigation.

### Payment strategies for e-commerce growth

UL helps our e-commerce retail customers build trusted security, compliance and global interoperability, improving their payment infrastructures globally and locally.

### Ingredient verification and audits for cannabinoid

Our product testing solutions for retail help verify that your cannabinoid products are compliant with applicable regulations. Furthermore, our food sanitation audits from UL's Everclean provide an extra level of protection for your brand and your consumers.

## CHOOSE UL

Businesses, consumers and regulatory authorities around the world recognize the trusted rigor and technical excellence of UL certifications and the UL Mark. When you need equipment, tools or service you can trust, look for the UL Mark!



We work with manufacturers around the world to certify their products that can be used in the legal cannabis supply chain:

- Security systems
- Safes and vaults
- HVAC/R equipment

To find UL certified products for your operation, please see our certification information in Product IQ™ at

[productiq.ul.com](https://productiq.ul.com).



## UL services for the legal cannabis industry include advisory, testing, inspection, certification and audit.

### Building and Safety Services

- Cannabis facility audit
- Fire and burglar alarms certification
- Building walls and windows (thermal/air/water/structural)
- Security/video building inspection
- Emergency communications system testing and certification
- Fire alarm control panel inspection
- Employee health and safety online training
- Extinguishing system inspection
- Sprinkler system inspection
- CO/gas detector inspection
- Smoke alarm/detector testing and certification
- Access control systems inspection
- Biometric devices inspection
- Intrusion sensors inspection
- Safe/vault inspection

### Retail and Product Services

- Process quality inspections
- cGMP/GPP audits
- Product testing
- Vape and heat and burn device safety and interoperability testing
- Food sanitation audits

### Sustainability Services

- Indoor air quality testing
- Near and zero waste validation
- Circularity and sustainability audit
- Outdoor air quality testing
- VOC emissions testing

### Lighting and HVAC Safety Services

- Horticultural lighting equipment testing and certification
- Photobiological safety assessments
- Performance ingress protection testing
- Ventilation equipment testing and certification
- Heating and air conditioning equipment testing and certification

### Information Security

- Cybersecurity system testing
- Cybersecurity gap assessment
- Security practices review
- Wireless communications testing
- 3-D secure solutions

### Extraction and Processing Equipment

- Industrial processing equipment testing and global certification
- Plant oil extraction equipment, systems and booths testing and global certification
- Evaluate pre and post extraction processing systems global certification

## About UL

UL brings clarity and expertise to the global market while empowering trust every step of the way to support the responsible design, production, marketing, and purchase of the goods, solutions, and innovations of today and tomorrow. UL works closely with a variety of diverse stakeholders to help make the industry safer by offering certification, validation, verification, inspection, testing, auditing and education to help companies navigate the growing complexities of supply chain management and market access.

If you need help, have questions or don't know where to start, contact us today!

Visit [UL.com/cannabis](https://ul.com/cannabis)

United States | T: 1.877.854.3577 | E: [cec@ul.com](mailto:cec@ul.com)

Canada | T: 1.877.854.3577 | E: [info.Canada@ul.com](mailto:info.Canada@ul.com)



## Empowering Trust<sup>®</sup>

UL and the UL logo are trademarks of UL LLC © 2020.