



International Organization for Standardization  
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Международная организация по стандартизации

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Ref. ISO/TMB IWA37

2020-08-04

## Invitation to an international workshop on:

### **Safety, Security and Sustainability of Cannabis Facilities and Operations**

Dear ISO Members,

Following approval by the Technical Management Board of a proposal from The Standards Council of Canada (SCC) and UL in Canada, we are pleased to invite you to a workshop to develop an International Workshop Agreement (IWA 37) on *the Safety, Security and Sustainability of Cannabis Facilities and Operations*.

#### **Workshop meeting dates:**

**Meeting 1: Nov 30 – Dec 4, 2020**

**Meeting 2: Jan 28, 2021**

**Meeting 3: May 3 - 7, 2021**

**Location:** Online virtual workshop

We ask that you register for the workshop not later than 30 September 2020 using the link included in the attached invitation.

We would be grateful if you could publicize this event in your country.

Yours sincerely,

Antoine Morin  
Secretary to the Technical Management Board

Encl.:

- Invitation including registration instructions, workshop schedule and agenda for meetings
- Draft proposal for IWA 37



**Standards Council of Canada**  
**Conseil canadien des normes**



**INVITATION TO PARTICIPATE**  
**ISO INTERNATIONAL WORKSHOP AGREEMENT (ISO IWA 37)**  
***Safety, Security and Sustainability of Cannabis Facilities and Operations***

The Standards Council of Canada (SCC) and UL invite all interested stakeholders to participate in an ISO International Workshop to develop three (3) documents covering the safety, security and sustainability of buildings, facilities, equipment and systems utilized for the cultivation, production, processing, transportation and sale of cannabis and cannabis products.

The three proposed Workshop Documents are:

- Workshop document #1 - Technical guide for the safety of cannabis buildings, equipment and oil extraction operations;
- Workshop document #2 - Technical guide for the secure handling of cannabis and cannabis products;
- Workshop document #3 - Good production practices (GPP) guide for cannabis.

While cannabis has been fully legalized in Canada and in many states in the U.S., it is a new and emerging industry that is moving at a very fast pace in many other parts of the world. While legalization is being deliberated by governments and legislative bodies, companies are creating their own infrastructure in anticipation of legal approval. Meanwhile, government regulators and the societies they serve are grappling with the lack of consistent rules and guidance to deliver safety, security and sustainability of cannabis facilities and operations, while growers and producers use their own judgment on how to establish and operate facilities.

While the world is currently experiencing a pandemic imposing to many businesses, industries and borders to remain closed, cannabis industries are thriving and considered an essential business in some jurisdictions, e.g. for medical applications. Thus, the potential safety, security and sustainability risks presented by the cannabis facilities and operations remain even relevant during this pandemic. In response, we can continue to conduct standardization activity during the pandemic virtually while planning for a potential physical meeting in 2021 when it is deemed safe to travel and assemble.

Please refer to additional information below. You may also contact Tess Espejo at +1.416.288.2212 or by email at [Theresa.Espejo@ul.com](mailto:Theresa.Espejo@ul.com) for more details. We hope you will join us in this important and exciting work!

Sincerely yours

**Joe Gryn**  
*Chair ISO/IWA 37*

**Theresa (Tess) Espejo**  
*Secretary, ISO/IWA 37*

## 1. SCHEDULE OF THE WORKSHOP

The IWA 37 documents will be developed during a series of virtual meetings and one potential physical meeting in the Spring of 2021, pending the status of the pandemic.

All virtual meetings will be conducted using *Zoom*. All meetings are scheduled for the Eastern time zone and will be conducted in English.

DATE	TIME	DESCRIPTION
Sept 30, 2020		Registration deadline
<b>Nov 30 – Dec 4, 2020</b> <ul style="list-style-type: none"> <li>• Nov 30</li> <li>• Dec 1</li> <li>• Dec 2</li> <li>• Dec 3</li> <li>• Dec 4</li> </ul>	<ul style="list-style-type: none"> <li>• 9:00 AM – 1:00 PM</li> <li>• 9:00 AM – 1:00 PM</li> <li>• 9:00 AM – 1:00 PM</li> <li>• 9:00 AM – 1:00 PM</li> <li>• 9:00 AM – 12:00 PM</li> </ul>	IWA Meeting #1 (Virtual via Zoom) <ul style="list-style-type: none"> <li>• Plenary Meeting</li> <li>• Working Group Meetings</li> <li>• Working Group Meetings</li> <li>• Working Group Meetings</li> <li>• Plenary Meeting and Closing</li> </ul>
Dec 2020 – Jan 2021	<i>At the call of WG conveners</i>	Working Group Meetings (Virtual via Zoom)
<b>Jan 28, 2021</b>	TBD	IWA Meeting #2 (Virtual via Zoom)
Feb – May 2021	<i>At the call of WG conveners</i>	<ul style="list-style-type: none"> <li>• Working Group Meetings (Virtual via Zoom)</li> <li>• Review and comment period (min of 15 days)</li> <li>• Resolution of comments</li> </ul>
<b>May 3 - 7, 2021</b> <ul style="list-style-type: none"> <li>• May 3</li> <li>• May 4</li> <li>• May 5</li> <li>• May 6</li> <li>• May 7</li> </ul>	<ul style="list-style-type: none"> <li>• 9:00 AM – 4:00 PM</li> <li>• 9:00 AM – 5:00 PM</li> <li>• 9:00 AM – 5:00 PM</li> <li>• 9:00 AM – 5:00 PM</li> <li>• 9:00 AM – 3:00 PM</li> </ul>	IWA Meeting #3 (Potential physical Meeting) Ottawa, Canada <ul style="list-style-type: none"> <li>• Plenary Meeting</li> <li>• Working Group Meetings</li> <li>• Working Group Meetings</li> <li>• Working Group Meetings</li> <li>• Plenary Meeting and closing</li> </ul>
June 30		Target publication date

## 2. REGISTRATION

2.1 To participate in the workshop, please register through this link: <https://events.ul.com/ISOInternationalWorkshop> and identify which working group you will be participating in. Deadline for registration is **Wednesday, September 30, 2020**. We strongly recommend that you advise your National Standards Body (NSB) that you have registered to participate in this workshop.

2.2 To effectively manage the workshop meetings, we will limit the number of speaking participants to five (5) per country for the plenary sessions and each of the individual working group meetings. If we receive more than five (5) registrants per country in each group, we will request that five (5) speaking participants are nominated to be the spokespersons.

- 2.3 Delegates who are not selected as speaking participants will be designated as observers. They may submit their questions and comments to their country participants who will speak on their behalf.
- 2.4 Registration is free. The delegates will bear their own expenses, including potential travel and living expenses, in 2021.

### 3. ISO IWA APPROVED PROPOSAL

Here is the proposal for an International Workshop Agreement on the Safety, security and sustainability of cannabis facilities and operations approved by the ISO TMB on June 23, 2020.

<b>Proposer</b> Standards Council of Canada
<b>Contact details of proposer</b> <b>Name:</b> Theresa (Tess) Espejo <b>Email:</b> Theresa.Espejo@ul.com
<b>Title of the proposed IWA</b> <b>Title: Safety, security and sustainability of cannabis facilities and operation</b>  <b>Summary of Proposal:</b> The workshop aims to develop and publish three documents to cover the safety, security and sustainability of buildings, facilities, equipment and systems utilized for the cultivation, production, processing, transportation and sale of cannabis and cannabis products. The three workshop documents are: <ul style="list-style-type: none"><li>• Workshop Document #1: Safety of cannabis buildings, equipment, and oil extraction operations</li><li>• Workshop Document #2 – Secure handling of cannabis and cannabis products</li><li>• Workshop Document #3 – Good production practices (GPP) Guide for cannabis</li></ul>
<b>Purpose and justification</b>  In October 17, 2018, Canada became the second country in the world to legalize access to both medical and recreational cannabis, with Uruguay being the first. As of January 2020, this number has quickly increased to four countries, 11 states and one District in the US, as well as the Capital Territory of Australia which has embraced full legalization. Other countries, such as the Netherlands, have not officially decriminalized the plant, although its sale and consumption for recreational purposes are tolerated. Twenty three other countries have legalized the medical use of cannabis and dozens more countries' law making bodies have introduced some form of legislation to legalize cannabis in one form or another.  It has become very clear that the global cannabis market is opening up very rapidly. The product and the industry will become more and more ubiquitous as the global barriers start to lower and come down. If the current trend continues, it is predicted that well over one third of the globe will accommodate cannabis by 2024.  What is unique about this new and emerging industry is that it is coming from an illicit status into decriminalization and evolving into a legitimate burgeoning business. Due to its pioneering status we are offered very little in terms of research, studies, historical experience and best practices. Standardization is likewise very slow in the uptake, and the cannabis industry remains severely underserved.  All of these provide distinct challenges for the safety, security and sustainability of cannabis buildings, premises, facilities and operations.

It has been argued that a cannabis cultivation facility should be treated like any other farm or agricultural facility, the cannabis production like any other hazardous or non-hazardous location and the retail store like any other pharmacy or retail store. The first years of the Canadian experience clearly illustrates that this is not the case.

With the rush of many investors to build their business, regulatory inspectors have expressed that every site looks different and they are unsure what requirements to apply. Buildings are renovated and repurposed into special construction designs that may not be addressed in existing codes and regulations. Many equipment being used for cannabis are being modified from other applications and there are few equipment standards for safety testing. There are unique uses of rooms and equipment where special considerations for fire and electrical safety are required. Moreover, even legalized medical production facilities have experienced fires, explosions and risk to personnel. UL Canada was first approached by the Ontario Fire Marshall who recognized that existing regulations did not adequately serve society's need for protection.

One of the pillars of legalization is to contain and eliminate the black market or criminal activities. Therefore, the handling of cannabis and cannabis products require robust security features in order to prevent the intrusion of illicit products into the legal market and the diversion of legal products into the black market.

Canadian regulations require license holders to follow good production practices to help ensure cannabis is produced consistently and that all activities conducted during the cultivation, production and processing of cannabis and cannabis products meet quality standards appropriate to the intended use of cannabis. However, since this is a very new and just emerging as an industry, there is no established good production practices for cannabis operations. Hence the need for a Guide.

The terpenes from the cannabis plants exude a potent aroma that is found to be unpleasant at best or extremely disturbing by surrounding communities. There has been no study or research to establish its effect on the health of humans. There is a need to develop guidelines on how to control cannabis odour and maintain the air quality inside and outside a cannabis facility.

UL Canada has developed a cannabis facility audit program based on the very first National Standard on cannabis, CAN/ULC-S4400:2019, Standard for Safety of Premises, Buildings and Equipment Utilized for the Cultivation, Production and Processing of Cannabis. The audit program has three parts: (1) inspection of buildings and facilities to ensure a minimum level of safety, fire protection and means of egress; (2) inspection of equipment and systems to ensure minimum level of protection against fire, electric shock, injury to persons and explosions; and (3) inspection of premises, equipment and systems to ensure security of the premises from intrusion, secure access and safe egress.

In November 2019, a joint Canada-United States National Standard ANSI/CAN/UL/ULC 1389:2019, Plant Oil Extraction Equipment for Installation and Use in Ordinary (Unclassified) Locations and Hazardous (Classified) Locations, was published to address the safety of cannabis oil extraction equipment.

UL Canada continues to listen to government regulators and industry stakeholders and are addressing standardization gaps in the cannabis industry by developing standards, technical specifications, technical guides and other recognized documents. It should be noted that among our allies in developing the much needed Standards and technical documents are some of the largest cannabis producers in the world who acknowledge the need for international Standards.

Canada is uniquely positioned to offer global thought leadership based on the initiatives taken to date to wrestle through the safety, security and sustainability considerations in coordination with regulators, government and industry stakeholders.

**Does the proposed IWA relate to or impact on any existing work in ISO committees?**

Yes       No

**Please list any relevant documents and/or ISO committees**

N/A

**Relevant stakeholders (list of organizations that may be interested)**

UL Canada, Germany, Denmark, Demko  
Canadian Security Association  
Aurora Cannabis  
Aurora Nordic, Denmark  
Aurora Deutschland, GmbH, Germany  
Canopy Growth/Spectrum Therapeutics, UK  
CannTx Life Sciences  
Zenabis Global  
3Carbon  
Swiss Extraction Tek  
CodeNext  
LRI Engineering  
Jensen Hughes  
JH & Associates  
HAL Extraction Technology  
NSBs of other countries, e.g., BSI (UK), DIN (Germany), DGN (Mexico), BSJ (Jamaica), NEN (Netherlands), SN (Norway), SAI (Australia), UNI (Italy), Lesotho and Eswatini

**Member body willing to act as secretariat**

Standards Council of Canada

**Annexes included with this proposal (give details)**

The following scope and outline of proposed documents are submitted for consideration:

*Note 1: The Workshop documents intend to reference existing IEC and ISO standards where they apply. Standards published by the following TCs are currently referenced in the proposed seed documents: IEC/TC79; ISO/TC21/SC3, SC5, SC6, SC8; and ISO/TC92/SC4.*

*Note 2: All seed documents will be available at least 60 days before the date of the 1<sup>st</sup> workshop meeting.*

**Workshop Document #1: Safety of cannabis buildings, equipment, and oil extraction operations**

**Scope:**

This document provides requirements for:

- A Buildings;
- B Installation and use of devices, equipment and systems; and
- C Cannabis oil extraction and post extraction methods;

to minimize potential hazards associated with the cultivation, processing and production of cannabis plants and cannabis products.

**Proposed Outline:**

- 1 Scope
- 2 Publication references
- 3 Terms and definitions

**Part 1 – Building**

- 4 Building classifications
- 5 Fire protection systems
- 6 Means of egress
- 7 Notification and signage
- 8 Fire safety and hazard assessment plan
- 9 Exhaust and ventilation
- 10 Processing rooms and classification of conditions for ancillary activities
- 11 Storage
- 12 Interior

**Part 2 – Devices and equipment**

- 13 Machine operations
- 14 Indoor air equipment and devices
- 15 Determination of compliance
- 16 Carbon dioxide use for other than extraction
- 17 Pesticide, chemical agent and fertilizer use and storage

**Part 3 – Cannabis oil extraction methods and processes**

- 18 Hydrocarbon extraction
- 19 Alcohol extraction
- 20 Carbon dioxide (CO<sub>2</sub>) extraction
- 21 Post processing

**Appendix (Informative) – Explanatory Materials**

**Workshop Document #2 – Secure handling of cannabis and cannabis products**

**Scope:**

1. This document provides minimum requirements for the security from intrusion and infiltration of premises and facilities utilized for the storage and handling of cannabis and cannabis products. Security measures may include physical barriers, manual systems and electronic systems to ensure secure access, surveillance or tracking and safe egress.  
*Note: Premises and facilities covered in this document include indoor and outdoor cultivation, processing / production facilities, retail stores, and micro grow operations.*
2. This document provides minimum requirements for the secure monitoring of cannabis and cannabis products during transportation.
3. This document provides guidelines for the installation, maintenance and inspection of physical and electronic premises security systems

**Proposed outline:**

- 1 Scope
- 2 Publication references
- 3 Terms and definitions

**Part 1 – Protection of Premises**

- 4 Electronic security systems – General requirements
- 5 Intrusion detection systems



- 6 Access control systems
- 7 Video surveillance systems
- 8 Physical security
- 9 Manual access and tracking systems
- 10 Monitoring and response

**Part 2 – Transportation and Logistics**

- 11 Communication
- 12 Vehicle tracking
- 13 Product security during transport
- 14 Chain of custody

**Part 3 – Installation, maintenance and inspection**

**Appendix (Informative) – Explanatory Materials**

**Workshop Document #3 – Good production practices (GPP) Guide for cannabis**

**Scope:**

1. This document provides minimum guidelines on the production, packaging, labelling, distribution, storage, sampling and testing of cannabis and cannabis products, as applicable in accordance with good production practices.
2. This document provides the requirements in accordance with the intended activity of a license holder to sell, distribute or export cannabis.
3. This document covers the following classes of cannabis and cannabis products:
  - Dried cannabis
  - Fresh cannabis
  - Cannabis plants
  - Cannabis plant seeds
  - Edible cannabis
  - Cannabis extracts
  - Cannabis topicals

**Proposed Outline:**

- 1 Scope
- 2 Publication references
- 3 Terms and definitions
- Part 1 – General requirements**
- 4 Responsible persons
- 5 Quality systems
- Part 2 – Preventive Controls**
- 6 Identification of hazards
- 7 Analysis of hazards
- 8 Prevention, elimination and reduction of hazards
- Part 3 – Facilities and Equipment**
- 9 Land and Building
- 10 Air handling system
- 11 Filtration, ventilation, water supply and lighting systems
- 12 Equipment
- 13 Sanitation program
- 14 Temperature and humidity
- 15 Production of food
- 16 Incompatible activities
- 17 Waste management
- 18 Pest control

19 Personal protective equipment and coverings

**Part 4 – Materials management system**

20 Receiving

21 Stock rotation

22 Storage

23 Distribution

24 Material retesting

**Part 5 – Production system**

25 Batch records procedure

26 Packaging system

**Part 6 – Laboratory system**

27 General requirements

28 Testing for phytocannabinoids (THC, THCA, CBD and CBDA)

29 Testing for contaminants

**Appendices**