![SHIMADZU Excellence in Science]

AA/ICP-MS

Balances

Biotech/MALDI

EDX/XRF/XRD

Fluorescence

FTIR

GC

GC-MS/MS

HPLC/UHPLC

LC-MS/MS

Particle Size

Software

Testing Machines

Thermal

TOC/TN/TP

UV-VIS-NIR

Shimadzu Program at the World Medical Cannabis Conference

Friday, April 13, 2018, 10:00 am-4:00 pm
Room TBD

Are you currently working in a cannabis testing laboratory or exploring opportunities to start one? Looking for more industry knowledge? Learn from the experts! Shimadzu and select industry partners are planning a full day symposium for cannabis laboratory personnel at the Medical Cannabis Conference.

Featuring the following talks and insider perspectives

Overview of Cannabis Testing
Bob Clifford, Shimadzu Scientific Instruments

Before we consume foods or prescription medicine there are government agencies protecting the population from harmful contaminates and ensuring the dosing on the labels are accurate. The same should be true for medical cannabis, especially since many patients may have immunocompromised systems. The protection comes in the form of analytical instruments utilized for cannabis testing. People need to know what the concentrations are for the various cannabinoids since each cannabinoid may have a different medical benefit. Terpenes have a synergistic effect with the cannabinoids from a medical standpoint. Wouldn't it great if cannabis came with a label of cannabinoid and terpene concentrations like that of food labels. This is possible with analytical instruments like HPLC and headspace GCMS for testing cannabinoids and terpenes, respectively. Analytical instrument testing is also for compounds not listed on the label like harmful contaminates of pesticides, residual solvents, heavy metals, mycotoxins, and pathogens. Other instruments such as LC-MS/MS, GC-MS/MS, and ICP-MS can be used to prevent exposure to these toxic compounds.

A Voyage into the Captivating Realm of Cannabis Science and Its Regulation
Jason Lupoi, RJ Lee Group

The cannabis industry as a whole is under considerable scrutiny. Finger-pointing and blame regarding inaccurate product labels run rampant. Media outlets have often faulted the skill of the laboratories, a circumstance that leaves everyone feeling confused, distraught, and outright swindled. More recently, several entities, such as ASTM International, have embarked on forging paths to standardize cannabis analytical testing. Some individuals have suggested that we look to relevant, standardized methods from parallel industries such as pharmaceuticals, agriculture, or food and beverage. Regardless of which procedures are nominated and implemented uniformly by states having legalized cannabis, this undertaking will take time…it cannot happen overnight. In the meantime, it is the responsibility of each member of the cannabis industry, regardless of business sector, to take on their share of the obligation in making sure that commercial products are safe for consumption, or that ancillary goods have been deemed scientifically valid by experts in the subject matter.

Cannabis is an extremely complex and fascinating medicinal plant. There are many sources of variance that can contribute to the final numbers placed on a product's label. These can include natural variation, horticultural differences, and diversity in the analytical methods used to evaluate plant and product chemistry. RJ Lee Group (RJLG) is committed to helping labs combat the latter source of variation, such that the data provided to their customers, and ultimately the public, is bulletproof. RJLG is the auditing body for the Washington State Liquor and Cannabis Board, and also provides consultation to labs in Nevada. Our pedigree translates well to the cannabis industry, as we have habitually provided expertise in evaluating vital public health and safety concerns. Some cannabis labs have shown questionable scientific integrity. Our mission is to eradicate bad science and provide assistance and expertise to facilities who strive to hone their skill and enhance the science of this developing industry. Until every patient can rest assure that the products they use in battling any number of ailments has been cultivated, processed, and analytically appraised with integrity, no one benefits.

Making a List and Checking it Twice: Are Pesticide Regulations Naughty or Nice?
Jeff Dahl, Shimadzu

Medical-use cannabis has been recently legalized in a number of states across the country and in Canada, and in some places, recreational use cannabis is also permitted. Most jurisdictions are in the process of establishing a regulatory framework for the cannabis industry, including consumer protections against potentially harmful chemical residues like pesticides. Testing requirements and regulations related to pesticides in cannabis have changed rapidly in the past few years, and often differ substantially between states. In this presentation, we will look at the current situation of pesticide regulations in cannabis and a comparison of the various approaches taken by different states.

Cannabis Sample Preparation: Pesticides, Potency and Pigmentation
Danielle Mackowsky, Forensic Technical Support Specialist, United Chemical Technologies

Cannabis is a complex matrix that has proven to be challenging to laboratories in both recreational and medicinal markets across the United States. Drawing on techniques that were originally developed for the food safety market, UCT has pioneered the use of the QuEChERS approach on both plant and edible materials. By coupling traditional, unbuffered salts,with novel technologies such as UCT's SpinFiltr® and Chlorofiltr®, it allows for end-users to obtain purified cannabis extracts for reliable analysis on LC-MS/MS and GC-MS instrumentation. Today's presentation will discuss the simultaneous extraction of pesticides and mycotoxins from cannabis, in addition to best practices for removing both chlorophyll and other unique pigments specific to certain strains. In addition, the results of a new collaboration between Shimadzu and UCT for the removal of cannabinoids from various sample types will also be presented.

Hands-On Cannabis Analyzer for Potency Workshop
Craig Young, HPLC Product Manager, Shimadzu

As interest in cannabis grows, it is useful to consider various goals for the quantitative analysis of naturally occurring cannabinoids by HPLC. Potency determinations typically focus on THC-A and CBD, but there are myriad cannabinoids closely related to these targets. Proper attention to the analysis goals should dictate the parameters that guide method development. In this talk I present three different analysis goals and how they govern the chromatographic approach and outcome.

A Day in the Life of a Medical Cannabis Sample
Dr. Kelly Greenland, Keystone State Testing

Your morning starts off the same as so many before, the light slowly overtakes the dark and you bask in the warmth absorbing energy to allow you to produce medically beneficial cannabinoids and terpenes. Then suddenly, you're dead. Someone has cut your stem separating you from your roots which provided nutrients and water. You're moved to hang upside down in a cool dry room where all that moisture you had consumed slowly leaves your body. After a week, your leaves and flowers are methodically stripped from your stems and ground to a rough mix. The mix is divided into 10-pound divisions and someone dressed in a goofy suit comes and takes small scoops and puts them in sealed containers and whisks them away. Your consciousness can still connect with the samples and you recognize as they're locked away in a container until they're at some sterile location far away. This is their story.

Be sure to also visit us at booths: 117 & 216

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