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While we have endeavoured to ensure that information contained in this publication is accurate, Shimadzu is not liable to any errors or omissions. All details are subject to change without notice.



CONTRIBUTING TO SOCIETY THROUGH SCIENCE AND TECHNOLOGY

Shimadzu Corporate Philosophy



2nd December 2022, Friday

NSTDA Characterization and Testing Service Center (NCTC), Thailand			
09:00 – 09:05	Welcome Address by Dr Natthaphon Wuttiphan, Director, NCTC, Thailand		
09:05 – 09:10	Opening Address by Mr Tetsuya Tanigaki, Managing Director, Shimadzu (Asia Pacific), Singapore		
09:10 – 09:25	Navigating Cannabis Regulatory Landscape in Thailand by Dr Natta Wiriyakun, Team Leader of Chemical Analysis Laboratory, NCTC, Thailand		
09:25 – 09:40	Shimadzu Total Solutions For Hemp & Cannabis by Ms Liw Wan Tung, Assistant Product Manager, Shimadzu (Asia Pacific), Singapore		
09:40 – 09:50	Panel Discussion Panelists: Dr Natthaphon Wuttiphan, Dr Natta Wiriyakun, Ms Liw Wan Tung		
09:50 – 09:55	Closing Address by Mr Prem Anand, Executive Officer & Senior General Manager, Shimadzu (Asia Pacific), Singapore		
10:00 – 10:30	Tea Break		
10:30 – 12:00	Shimadzu End-To-End Hemp & Cannabis Laboratory Tour For VIP Delegates 1. Cannabis Analytical Testing Center (Cannabis Analyzer, LCMS, GCMS) 2. Food Analysis Lab (LC/LC-MS/LC-MS-MS GC/GC-MS/GC-MS-MS) 3. Imaging Mass Spectrometry Lab (iMScope) 4. Advanced Surface & Elemental Lab (EPMA & XPS)		
12:00 – 13:15	Lunch		





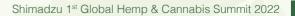
15:00 - 16:30 Asia International Hemp Expo 2022

Sangkok Royal Princess Cruise

19:00 - 21:00 Shimadzu 1st Global Hemp & Cannabis Summit Gala Dinner 2022

3rd December 2022, Saturday

09:00 – 11:30	Visit The Grand Palace & Wat Phra Kaew *Special Note: Please dress respectfully with clothing that cover your shoulders, knees and ankles		
12:00	Check out of Hotel		
12:15 – 13:15	International Lunch Buffet		





Mr Tetsuya Tanigaki

Managing Director Shimadzu (Asia Pacific), Singapore

My gratitude to all of you for joining us at our Shimadzu 1st Global Hemp and Cannabis Summit 2022.

Today, the world is rapidly evolving with many unprecedented changes. We must stay ahead of the curve and respond to emerging needs immediately. With Thailand leading the way in legalizing hemp and cannabis in Asia, it is crucial that we listen to customers' needs and provide them with essential solutions quickly.

The launch of the Shimadzu 1st Global Hemp and Cannabis Summit 2022 underlines our commitment to putting our customers first. From the future trends of hemp and cannabis to Shimadzu's end-to-end solutions and the Living Laboratory, you will gain valuable takeaways that will be useful for your business.

At Shimadzu, we always believe in "Contributing to Society Through Science and Technology". We will continue to provide you with advanced technologies and leading innovations to address emerging needs in the industry.

We hope you will enjoy this grand event, where you will have the opportunity to network with other leading industry professionals, gain insights into trending topic, and become equipped with the necessary knowledge to realize hemp and cannabis' expanding market potential.

With that, thank you for being with us at Shimadzu 1st Global Hemp and Cannabis Summit 2022.





Dr Natthaphon Wuttiphan

Director

NSTDA Characterization and Testing Service Center, Thailand

On behalf of NSTDA Characterization and Testing Service Center (NCTC), I would like to welcome you to this very grand event we have jointly organized with Shimadzu – the Shimadzu 1st Global Hemp and Cannabis Summit 2022.

Shimadzu has been a strong partner with NCTC for 8 years and going. I am honoured to have Shimadzu supporting NCTC's commitment to delivering the best analytical services in Southeast Asia by providing state-of-the-art instruments and advanced technologies. This includes supporting NCTC's multitude of services, from Physical Characterization to Chemical Analysis, Biological Characterization, and more. The acquisition of science and technology plays an extremely important role in Thailand's industrial development.

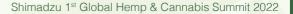
Now that Thailand has legalized Hemp and Cannabis in Asia, we are proud to have Shimadzu leading the way by having the first-ever Global Hemp and Cannabis Summit to address the emerging needs.

We are also pleased to share that NCTC is an ISO/IEC-17025 accredited Cannabis/Hemp Testing Laboratory. With this, we will be able to meet your relevant needs and value-add to your business. NCTC is always open for new collaboration and advancing science with you.

In fact, NCTC provides comprehensive analysis services throughout the cannabis value chain, from cultivation to extraction and final products (medicinal products, food, beverages, cosmetics, etc.). This includes QA/QC analysis of active compounds and contaminants. R&D needs are also supported, such as drug discovery, drug development, and active compound monitoring.

With that, please enjoy the first-ever Shimadzu 1st Global Hemp and Cannabis Summit 2022 and have a pleasant stay in Bangkok.

Thank you very much.







Mr Prem Anand

Executive Officer and Senior General Manager Shimadzu (Asia Pacific), Singapore

With the changing regulatory trends, we have seen the rapid expansion of the medical hemp and cannabis market. In fact, according to industry forecasts, this market will reach US\$ 52.8 billion by 2027. There is one thing clear from this trend: Today, the pharmaceutical industry is facing key disruption with the rise of medical hemp and cannabis.

In Asia, Thailand is the first country to legalize hemp and cannabis with the aim of promoting it for medical and health purposes. This has unlocked new market opportunities and growth potential. With other countries potentially following Thailand's lead, we may see a Cannabis Reform in Asia in the future.

Dear Ladies and Gentlemen, keeping this in mind, I would like to welcome you to Shimadzu 1st Global Hemp and Cannabis Summit 2022. This first-ever Summit is held in response to the rising interest in cannabis and to address the emerging needs swiftly.

During the Summit, you will have the opportunity to network and discuss sustainable solutions for the testing of hemp and cannabis. You will experience an exclusive tour of NCTC Testing Labs and get to visit the Asia International Hemp Expo 2022, the first and only International Hemp-Cannabis Expo in Thailand. We will offer you the total solutions to hemp and cannabis to help you strategically navigate through the fast-changing landscape.

Since 1875, we have strived to meet our customers' needs across the world and this year is no exception. Shimadzu 1st Global Hemp and Cannabis Summit 2022 will address the testing needs to ensure safe products with high quality, thereby value-adding to your business.

Let us work together and capitalize on the fast-rising trend of hemp and cannabis in Asia with Shimadzu's leading-edge analytical technologies. Thank you very much.



Dr Natta Wiriyakun

Team Leader of Chemical Analysis Laboratory
NSTDA Characterization and Testing Service Center, Thailand

Navigating Cannabis Regulatory Landscape in Thailand

Our esteemed speaker, Dr Natta Wiriyakun, will discuss the use of medical hemp and cannabis and their applications in food, beverage, or cosmetic products from the latest regulatory perspectives in Thailand.

In these applications, analytical testing and technologies are crucial in ensuring the utmost safety and quality of hemp and cannabis. The presentation will also share how NCTC can provide reliable and robust cannabis-related analysis (ISO 17025 certified) with Shimadzu's leading-edge instruments.



Ms Liw Wan Tung

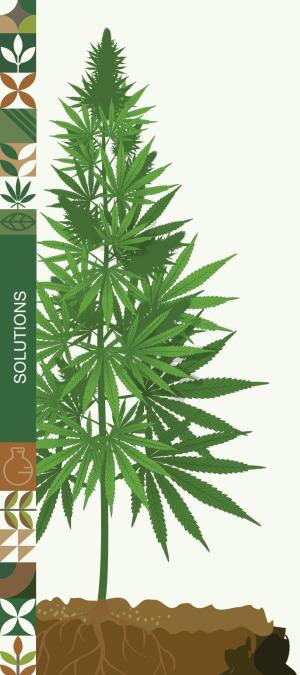
Assistant Product Manager Shimadzu (Asia Pacific), Singapore

Shimadzu's Total Solutions for Hemp and Cannabis

Shimadzu's hemp and cannabis testing solutions covers a broad range of applications, from accurate potency testing and terpene profiling to contamination testing for pesticides, residual solvents, heavy metals, and mycotoxins/aflatoxins to ensure high quality and safety.

Herein, discover how Shimadzu offers turn-key solutions to help you handle the analysis with ease. The presentation will bring you through the comprehensive workflow solutions and strategies to overcome the pain points in the analysis effectively.

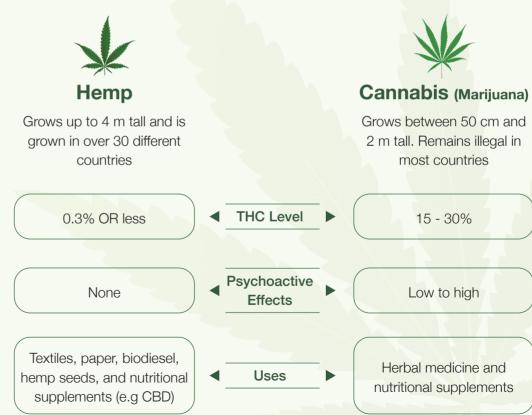




Shimadzu's Total Solutions for

Hemp and Cannabis

Cannabis and hemp belong to the same species of plant, but the defining difference lies in the content level of tetrahydrocannabinol (THC). Whether it is hemp or cannabis, Shimadzu offers comprehensive solutions to address your analysis needs.



Shimadzu is the Number 1 Hemp and Cannabis End-to-End Solutions Expert





Potency Testing

Testing for cannabinoids is crucial for the accurate labeling of cannabis and hemp products. The term "potency" refers to the quantitation of major cannabinoids, namely THCA, THC, CBD, and CBN.

LC Solutions

Shimadzu's LC is a turnkey analyzer that delivers a comprehensive package that integrates instrument hardware, software, consumables, and proven methods to meet your needs.



Advanced i-Series



Terpene Profiling

Cannabis' unique flavor and fragrance are derived from terpenes and terpenoid compounds. They also have a synergistic relationship with cannabinoids, which enhances THC's therapeutic effect.

GCMS Solutions

Shimadzu's GCMS coupled with either HS-20 NX or the AOC-6000 Plus, and the included Wiley/NIST library, can easily identify >4,000 flavour and fragrance compounds to meet your terpene profiling needs.



GCMS-TQ8050 NX + HS-20 NX



Pesticide Analysis

Besides requiring highly sensitive LCMS and GCMS, robustness and speed are also important for accurate and economical cannabis analysis.

LCMS/GCMS Solutions

Shimadzu's patented Ultra-Fast Mass Spectrometry (UFMS) technology delivers excellent sample throughput with reliable and robust results, making them ideal for analyzing pesticides in cannabis industry.



LCMS-8060NX



Residual Solvents

Various solvents (volatile organic compounds) were used during the manufacturing process of cannabis products. Residual solvents may remain in the products.

GCMS Solutions

Shimadzu's solutions such as HS-GC-FID or HS-GC-MS enable rapid identification and quantitation of very low concentrations of residual solvents, thereby ensuring chemical-free products for safe usage.



GCMS-TQ8050 NX + HS-20 NX







Shimadzu offers comprehensive testing to ensure safe hemp and cannabis products of highest quality, to be used in a range of applications including medical, food, beverage, cosmetic products, and many more.



Heavy Metals

Different types of metals can be found in soils and fertilizers, and as cannabis plants grow, they tend to draw in these metals from the soil.

ICPMS Solutions

Shimadzu's ICPMS is the ideal analytical workhorse for this testing. Together with the Shimadzu's analysis software that simplify the analysis, users can achieve confident results with exceptionally high reliability.



ICPMS-2030



Moisture Content

Moisture can be highly detrimental to the quality of stored cannabis products. Dried cannabis typically has a moisture content of 10-12%. Beyond 12% may result in mold growth.

Moisture Analyzer Solutions

Shimadzu's MOC63u (and MOC-120H) balances are capable of accurate, quick and easy moisture ratio measurements that makes them applicable to a variety of cannabis products.



MOC63u



Mycotoxins Analysis

Mycotoxins are a toxic secondary metabolite of mold. To ensure food safety, strict restrictions are implemented on the allowable limits found in food.

LCMS Solutions

Shimadzu's LCMS equip cannabis laboratories with the ability to rapidly test for mycotoxins with ultra-low levels of detection, particularly with the capabilities of Shimadzu's UFMS technology.



LCMS-8060NX



Particle Size Testing

Smaller particle size emulsions are more stable, have higher bioavailability, and can be incorporated into a wide range of products. Nano-emulsions are the most ideal.

Testing Solutions

Shimadzu's SALD-2300 Laser Diffraction Particle Size Analyzer is equipped with powerful new functions for accurate analysis, making it ideal for measuring particles from 17 nm to 2500 µm.



SALD-2300

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