



GENTECHTM
S C I E N T I F I C

CANNABIS TESTING INSTRUMENT SOLUTIONS

START YOUR CANNABIS LAB FOR LESS!

Phone: 585.492.1068

Website: GENTECHSCIENTIFIC.COM

Email: Sales@GENTECHSCIENTIFIC.COM

CANNABIS TESTING EQUIPMENT

For over 25 years, GenTech has provided its services to thousands of satisfied customers. We offer you the instruments required to test cannabis at a fraction of the cost of new instruments. Let GenTech help alleviate the cost of starting up your cannabis lab, with our instrument expertise and extended warranties.

RELIABILITY ASSURED:

- Over 20 Years Serving the Scientific Community
- Supplies Refurbished GC, HPLC, MS, & LC/MS Instrumentation
- Guaranteed to Meet the Manufacturer's Standards
- Superior Customer Service
- 1 Year Warrantied Systems
- Financing Options

We are a full service reseller of all major manufacturers of analytical instrumentation. We offer customized training, expert service, repair and professional installation. Lease, rent, buy or finance we offer the options you need to equip your lab for less.



CUSTOM INSTRUMENT TRAINING

GenTech Technical Institute is your best source for expert training! GenTech is equipped to provide in-depth training on applications related to the instrument, either at your site or our own facility. With expertise on equipment from most major manufacturers, let GenTech help your lab get started.

RECOMMENDED OPERATOR'S PREREQUISITE SKILLS:

- Bachelors degree with a focus on Chemistry
- 1-2 Years experience with using chromatography instruments

TRAINING INCLUDES:

- Hands-on and can be done at our location or yours
- Testing Theory of the Instruments for your Chemist
- Equipment Operation & How to Effectively Run Samples
- Cannabis Testing Methods
- Troubleshooting & Basic Maintenance

From chromatography novices to experts in the field, we can help you generate quality results from your samples.

*The training available is to build on prior analytical instrumentation knowledge.



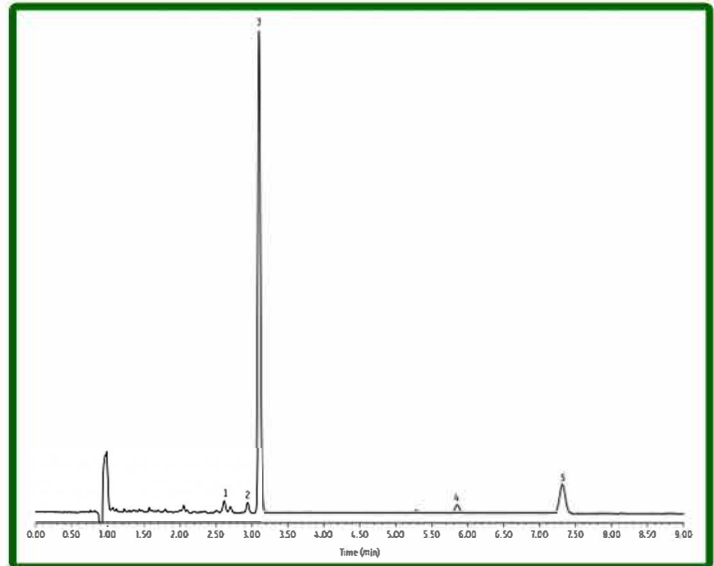
POTENCY ANALYSIS

WHAT IS POTENCY TESTING?

Potency analysis identifies these compounds and measures their levels of strength. Cannabis potency testing normally focuses on the compounds called cannabinoids. Cannabis is made up of over 500 chemical compounds. The most commonly tested cannabinoids are: Tetrahydrocannabinol (THC), Tetrahydrocannabivarin (THCV), Cannabidiol (CBD), Cannabidivarin (CBDV), Cannabinol (CBN), Cannabichromene (CBC), Cannabigerol (CBG) and Cannabigerivarin (CBGV).

Cannabinoid profile and potency screening aids growers, processors, dispensaries and quality control laboratories in knowing the level of cannabinoids in their samples. This research shows the compound profiles of different strains and is necessary for accurate labeling of both medicinal and recreational products.

The two most common means to accurately quantitatively determine the potency of cannabinoid constituents are Gas and Liquid Chromatography (GC, HPLC).



AN LC_GN0581 Source: Restek

*Our cannabis start-up kits get your lab running samples quickly. Inquire today for availability.

CATEGORY I & II RESIDUAL SOLVENT ANALYSIS

Residual solvent analysis is important for any highly-concentrated forms of cannabis. When butters, oils, wax and shatters are created, solvents are used to extract the cannabinoids from the physical plant material.

There are three classes of residual solvents based on their assessed risk to human health. Repeated exposure to residual solvents can cause significant health issues to patients, including allergic reactions, headaches, nausea and more.

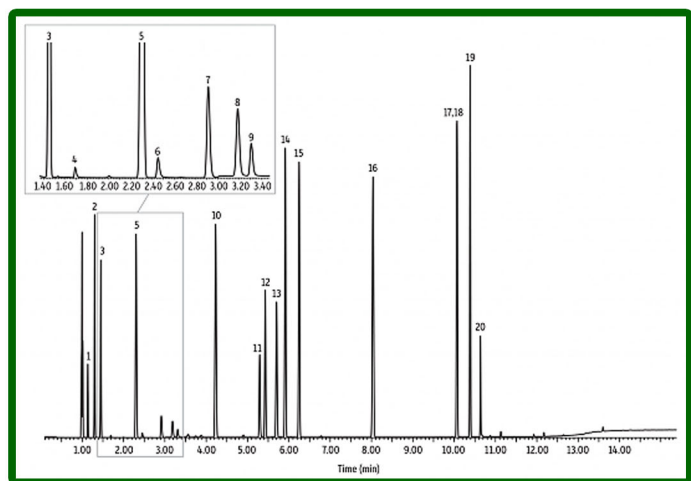
- Class 1 Solvents are solvents that are to be avoided because they are known carcinogens, suspected carcinogens and environmental hazards.
- Class 2 Solvents are to be limited. These may be possible causative agents or other irreversible toxicity like neurotoxicity.
- Class 3 Solvents have low toxic potential and should be the only solvent used for extracting cannabinoids from cannabis materials.

The most common means to accurately quantitatively determine the residual solvent analysis is through Gas Chromatography (GC).



INSTRUMENTATION:

Agilent 6890(FID) with Headspace Autosampler



AN GC_GN1197 Source: Restek

CATEGORY I & II PESTICIDE & HERBICIDE ANALYSIS

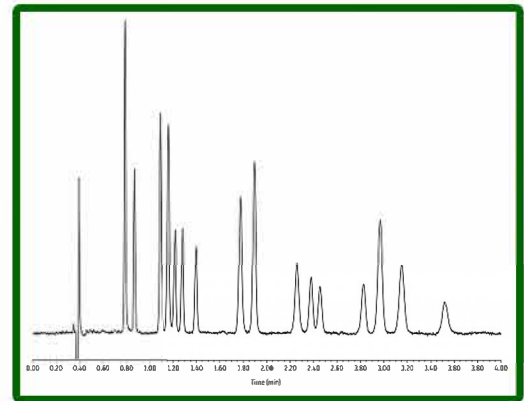
Pesticides are chemicals used to kill off fungus, insects and bacteria, among other things. Pesticides, herbicides and insecticides contaminates can cause severe health risks to consumers of cannabis products. Liver damage, cancer and decreased muscle function are among the dangerous side effects of pesticides .

States require testing to ensure that the cannabis does not contain harmful levels of pesticide residues. Check your individual state for which tests are required.

Pesticide qualification and quantification can be performed with either liquid or gas chromatography with a mass spectrometer. (LC/MS/MS)

INSTRUMENTATION:

TSQ Quantum Ultra with PAL Autosampler & Quaternary HPLC



AN LC_GN0579 Source: Restek



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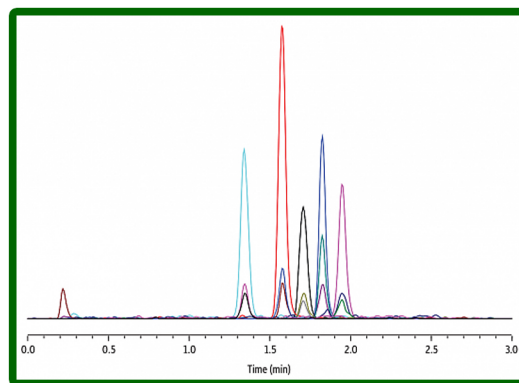
MYCOTOXINS

Plant matter, including marijuana, are ideal breeding grounds of many types of microbes such as bacteria and molds. Many of the mold species are capable of creating compounds that are known for causing certain diseases and cancers-mycotoxins. Patients that are experiencing immune system impairments are at high risk from mycotoxin contaminated products.

The major groups of mycotoxins include: Aflatoxins, Ochratoxin, Citrinin, Ergot, Patulin and Fusarim. Aflatoxin B1, aflatoxin B2, aflatoxin G1, aflatoxin G2 and ochratoxin A are the most commonly regulated. Check with your state for which mycotoxins are required to be tested and what their maximum permitted levels are.

INSTRUMENTATION:

Vicam 4EX Fluorometer BEQ



LC_GN0585 Source: Restek



CATEGORY I & II PESTICIDE & TERPENES ANALYSIS

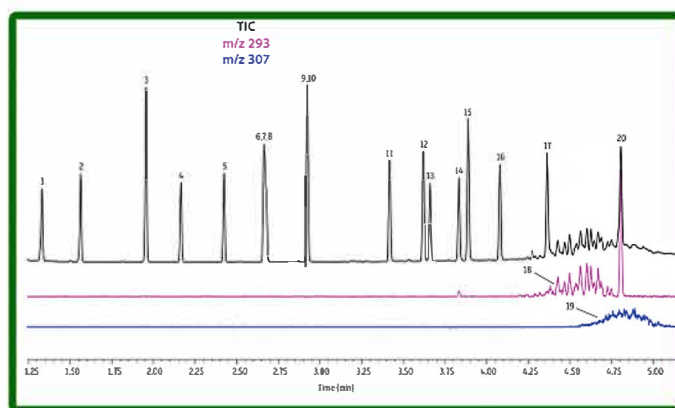
Pesticides are chemicals used to kill off fungus, insects and bacteria, among other things. Pesticides, herbicides and insecticides contaminants can cause severe health risks to consumers of cannabis products. Liver damage, cancer and decreased muscle function are among the dangerous side effects of pesticides .

Terpene analysis can profile such Terpenoids as Linalool, Citronellol, Carophyllene Oxide, Myrcene, Terpinolene, Limonene, Alpha Pinene, Alpha Humulene, Beta Carophyllene & Phytol.

INSTRUMENTATION:

Agilent 5973 MSD with 6890 GC and Automatic Liquid Sampler

The most common means to accurately quantitatively determine the pesticide and terpene analysis is Gas Chromatography with a Mass Spectrometer (GC/MS).



GC_EV1416 Source: Restek

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GENERAL LAB EQUIPMENT NEEDED FOR CANNABIS TESTING



FOREIGN MATTER ANALYSIS
Visual Dynamix X120 Microscope



WATER ACTIVITY ANALYSIS
Rotronic HC2-AW-USB Set



PH METER
Ohaus pH Meter S5000-B



MOISTURE CONTENT
Ohaus MB90 Moisture Analyzer

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CONSUMABLE KITS

Pesticide & Terpene Analysis GC/MS Consumable Kit

Calibration Standards	Instrument Consumables
Pesticide: CA Pesticide Mix #4	GC/MS Install kit
Naled (Dibrom)	GC/MS Starter kit
Terpenes: 42-component-terpene-kit	Liner
	Screw-Top Autosampler Vials & Caps
	HTA AS syringe
	Column
	Autosampler PM kit

Potency Analysis HPLC Consumable Kit

Calibration Standards	Instrument Consumables
Delta-9-THC	1L Mobile Phase System
Delta-8-THC	Guard Column Cartridge
THCA	Column
THCV	Guard Column Holder
CBD	HPLC Starter Kit, PEEK
CDBA	Screw-Top Autosampler Vials & Caps
CBDV	1100 Pump Maintenance kit
CBG	Wrench
CBGA	
CBN	
CBC	
THC, CBD, CBN	

Pesticide & Herbicide Analysis LC/MS Consumable Kit

Calibration Standards	Instrument Consumables
California Pesticide Mix #1	HPLC Starter kit
California Pesticide Mix #2	Pest column
California Pesticide Mix #3	Ultra Guard Cartridges
	LC Column Protection
	Screw-Top Autosampler Vials & Caps
	LC Column
	Guard Column
	EXP Direct Connect Holder
	3-Hole Cap
	Solvent Bottles

CONSUMABLE KITS

We know that outfitting your testing lab can seem a daunting task. Use GenTech as a resource throughout the process. With over 20 years of experience in the industry, and with expertise on equipment from most major manufacturers, GenTech is the perfect partner! We are equipped to provide the general equipment you will need for cannabis testing, as well as specific kits for different methods. Contact us, and let GenTech equip your lab.

General Lab Equipment Needed for Cannabis Testing		
Method	Equipment	Analysis Description
Foreign Matter Analysis	Microscope	Visual inspection of raw cannabis using a microscope will allow the confirmation of absence of foreign material contamination or evidence of damage.
Water Activity Analysis	Water Meter	Measuring water activity is an important step to reduce spoilage in your cannabis product. It allows you to test how susceptible the product is to microbial corruption.
Moisture Content	Moisture Analyzer	It is essential to properly dry cannabis during the production process. Moisture analysis is key to making sure you have optimum moisture levels to avoid risk of contamination.
pH Analysis	pH Meter	The digital pH meter is the easiest and most effective method to test levels. If the pH is tested outside of the recommended level, the plant will be more or less susceptible to pests and disease.

Residual Solvents Analysis GC/FID Consumable Kit	
Calibration Standards	Instrument Consumables
CA Residual Solvents Mix #1 (Inhaled)	Premium GC/FID Install Kit
CA Residual Solvents Mix #2 (Inhaled)	Column Nuts
CA Residual Solvents Mix #1 (Infused)	FID Flow Adapter
CA Residual Solvents Mix #2 (Infused)	Inlet wrench
	Ferrules
	Liners
	Liner O-rings
	Inlet seals
	Headspace crimp vials
	Aluminum seals
	Vial Crimper
	Column
	Syringe Barrel
	Syringe Plunger
	Headspace Sampler PM kit