

# Confidently Test the Safety of Cannabis Products

From extracts to final derived cannabis products, Agilent columns and supplies can help you effectively perform key cannabis testing applications.

## Pesticide and mycotoxin testing

Potentially harmful pesticides and mycotoxins may be present in cannabis crops and extracts, so monitoring is crucial. Agilent offers four instrument-based kits that contain columns and enough sample preparation supplies are needed to detect these substances in 400 samples.

Residual pesticide analysis in cannabis matrices is challenging due to the complexity of the matrix and the very low action limits, requiring LC/MS/MS and GC/MS/MS methods.

This guide includes links for the various kits as well as the recommended columns and supplies required for running the methods described in the following application notes and e-Methods:

- **5994-0429EN** A Sensitive and Robust Workflow to Measure Residual Pesticides and Mycotoxins from the Canadian Target List in Dry Cannabis Flower (available as e-Method G5279#030 or **M5657AA** with 1290/6470 LC/TQ and G5278#030 or **M5654AA** with 7890/7010B GC/TQ)
- **5994-1604EN** Analysis of Challenging Pesticides Regulated in the Cannabis and Hemp Industry with the Agilent Intuvo 9000-7010 GC/MS/MS System: The Fast-5. (available as e-Method G5278#020 or **M5653AA**)
- **5994-1127EN** Why LC/MS/MS and GC/MS/MS Are Required for the Analysis of Certain Pesticides
- **5994-1786EN** Analysis of 27 GC-Amenable Pesticides in Cannabis in North America with the Agilent 8890/7010B Triple Quadrupole GC/MS System (available as e-Method G5278AA#010 or **M5652AA**)
- **5994-1734EN** Determination of Pesticides and Mycotoxins in Cannabis Flower as Defined by Legalized U.S. State Recreational Cannabis Regulations (available as e-Method G5279#10 or **M5655AA** with the 1260/Ultivo LC/TQ and G5279#020 or **M5656AA** with the 1260/6470 LC/TQ System)

Utilize the *MyList* links to add items under each category to your *Favorite Products* page in the [Agilent online store](#).

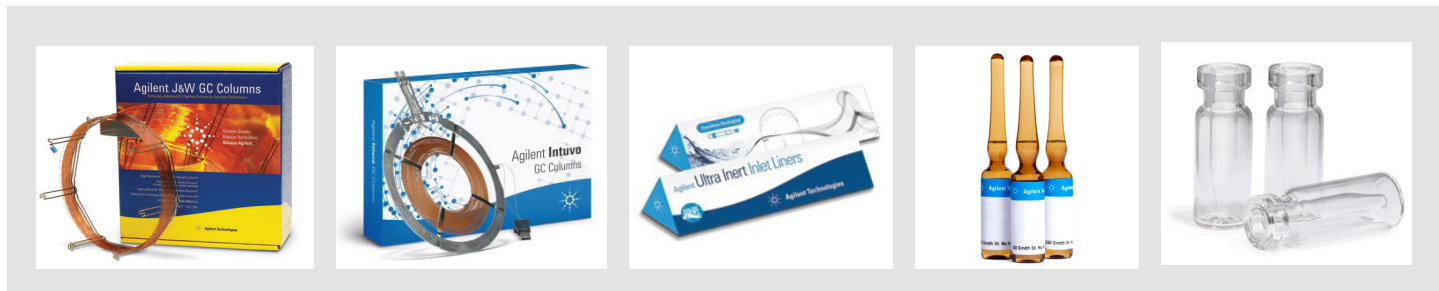
Then, enter the quantities for the products you need. Your list will remain under your *Favorite Products* for future orders.

If this is your first time using the *Favorite products* page, you will be asked to enter your email address for account verification. If you have an existing Agilent account, you will be able to log in. However, if you don't have a registered Agilent account, you will need to register for one. This feature is valid only in regions that are e-commerce enabled. All items can also be ordered through your regular sales and distributor channels.

Agilent e-Methods are designed to accelerate your startup time by condensing the vast amounts of technical information and optimized analytical methods into a ready-to-run, downloadable, digital information package.

This guide provides a list of all the columns and supplies required to run the e-Methods associated with the Application notes. The M#####AAA methods can be purchased online, while the corresponding G##### can be purchased through your local sales and distribution channel.

## Pesticides and Mycotoxins testing of cannabis flower



### Sample Preparation and Sample Containment

View [MyList](#) for the items in the table below:

Description	Part Number
SampliQ SPE cartridges: C18 endcapped, 6 mL tubes, 500 mg, 30/pk	5982-1365
Ceramic homogenizers for 50 mL tubes, 100/pk	5982-9313
Centrifuge tubes, 50 mL, 25/pk	5610-2049
SPE cartridge rack, 6 mL, for PPM-48	5191-4104
Waste rack and 3 waste bins, for PPM-48	5191-4112
Cap, screw, green, PTFE/red silicone septa, 100/pk	5182-0718
Vial, screw top, amber, write-on spot, deactivated (silanized), certified, 2 mL, 100/pk	5183-2072
Vial insert, 250 µL, deactivated glass with polymer feet, 100/pk	5181-8872

### GC Columns and Supplies for 7890/8890

View [MyList](#) for the items in the table below:

Description	Part Number
<b>For Canada methods</b>	
J and W HP-5ms Ultra Inert GC column, 15 m, 0.25 mm, 0.25 µm	19091S-431UI*
J and W DB-35ms Ultra Inert GC column, 15 m, 0.25 mm, 0.25 µm	122-3812UI*
ALS syringe, blue line, 10 µL, fixed needle, 23/42/cone, PTFE-tip plunger	G4513-80220
Inlet septa, advanced green, non-stick, 11 mm, 50/pk	5183-4759
Inlet liner, Ultra Inert, splitless, dimpled, 2 mm id, 5/pk	5190-4006*
Inlet liner, Ultra Inert, splitless, single taper with wool, 4 mm id, 5/pk	5190-3163*
Ferrule, 0.4 mm id, 15% graphite/85% Vespel, 0.1 mm to 0.25 mm column, 10/pk	5181-3323
Internal nut, CFT capillary fitting	SG2855-20530
Ferrule, flexi inert 0.25 mm column, 10/pk	G3188-27501
Column nut, collared, self-tightening, inlet/detector	G3440-81011
Column nut, collared, self-tightening, MSD	G3440-81013
Purged Ultimate Union - Inert	G3186-60581
Ultra Inert Gold Seal, with washer, 10/pk	5190-6145
Gas Clean carrier gas kit for 7890	CP17988
Gas Clean carrier gas kit for 8890/8860	CP179880
Gas Clean carrier gas purifier replacement cartridge	CP17973

\* U.S. customers favor a HP-5ms Ultra Inert x HP-5ms Ultra Inert setup (two columns total) with liner p/n 5191-4006, p/n 5190-2297, 1/pk, while customers in Canada favor a HP-5ms Ultra Inert x DB-35ms Ultra Inert setup with liner p/n 5191-3163 (p/n 5190-2293, 1/pk).

## Chemical Standards\*

Description	Part Number
View <a href="#">MyList</a> of California mixes and standards	
California Cannabis Pesticide Kit (2020)	PST-CBS-CA
California (universal) pesticides standard 1	SCA-200-1
California (universal) pesticides standard 2	SCA-201-1
California (universal) pesticides standard 3	SCA-202-1
Azoxystrobin	PST-1905A100A01
Captan	PST-090K100A01
Chlordane (mixture of isomers)	PP-150-1
Chlorfenapyr	PST-2120M100A01
Coumaphos	PST-130M100A01
Dimethomorph	PST-2210A100A01
Ettoxazol	PST-2265K100A01
Fenhexamid	PST-2295A100A01
Fludioxonil	PST-2340A100A01
Mevinphos (phosdrin)	PST-710M100A01
Pentachloronitrobenzene (Quintozene)	PST-770A100A01
Piperonyl butoxide	PST-820A100A01
Spinetoram J	PST-3730A1000
Spiroxamine	PST-2575A100A01

View [MyList](#) of Oregon mixes and standards:

Oregon Cannabis Pesticide Kit (2020)	PST-CBS-OR
Oregon pesticides standard 1	SOR-100-1
Oregon pesticides standard 2	SOR-105-1
Oregon pesticides standard 3	SOR-120-1
Azoxystrobin	PST-1905A100A01
Chlorfenapyr	PST-2120M100A01
Chloromequat chloride	PST-2870M100A01
Ettoxazol	PST-2265K100A01
Fludioxonil	PST-2340A100A01
Naled (Systhane) (Dibrom)	PST-730A1000
Phenothrin	PST-2700M100A01
Trifloxystrobin	PST-2630A100A01

View [MyList](#) of Nevada mixes and standards:

Nevada Cannabis Pesticide Kit (2020)	PST-CBS-NV
Nevada pesticides standard 1	SNV-100-1
Azoxystrobin	PST-1905A100A01
Chlorfenapyr	PST-2120M100A01

View [MyList](#) of Colorado mixes and standards:

Colorado Cannabis Pesticide Kit (2020)	PST-CBS-CO
Colorado pesticides standard	SCO-100-1

View [MyList](#) of Canada mixes and standards:

Canada Cannabis Pesticide Kit (2020)	PST-CBS-CAN
--------------------------------------	-------------

\* Our chemical standards recommendations show existing mixes offered by Agilent, and the additional compounds needed, to meet state requirements as of April 1, 2020.

## LC Columns and Supplies

View [MyList](#) for the items in the table below:

Description	Part Number
InfinityLab Poroshell 120 Phenyl-Hexyl, 3 x 100 mm, 2.7 µm LC column	695975-312
InfinityLab Poroshell 120 Phenyl-Hexyl, 3 x 5 mm, 2.7 µm, UHPLC guard, 3/pk	823750-914
Formic acid, 5 mL	G2453-85060
5M ammonium formate solution	G1946-85021
InfinityLab Ultrapure LC/MS acetonitrile	5191-4496
InfinityLab Ultrapure LC/MS methanol	5191-4497
InfinityLab Ultrapure LC/MS water	5191-4498
Quick Connect assembly, 0.12 x 105 mm, for connection at column inlet on UHPLC systems	5067-5957
Quick Connect assembly, 0.17 x 105 mm, for connection at column inlet on HPLC systems	5067-6166
Quick Turn fitting, for connection between column outlet and detector	5067-5966
Quick Turn capillary, 0.12 x 280 mm, for column outlet	5500-1191

## GC Columns and Supplies for Intuvo 9000

View [MyList](#) for the items in the table below:

Description	Part Number
JandW HP-5ms Ultra Inert Intuvo GC column module, 15 m, 0.25 mm, 0.25 µm**	19091S-431UI-INT
ALS syringe, blue line, 10 µL, fixed needle, 23/42/cone, PTFE-tip plunger	G4513-80220
Inlet septa, advanced green, non-stick, 11 mm, 50/pk	5183-4759
Inlet liner, Ultra Inert, splitless, dimpled, 2 mm id, 5/pk	5190-4006
Compression bolt, Intuvo	G4581-60260
Intuvo polyimide gasket, 5/pk	5190-9072
Guard chip, Intuvo, multimode inlet, 2/pk	G4587-60665
Gas clean kit for Intuvo	CP17995

\*\* Qty=2 required for setup

## Pesticides and mycotoxins consumables kits

Order the kit most suited for your laboratory using the following links:

- LC/MS Kit (designed for U.S. state pesticide lists that only include LC/MS amenable compounds)  
p/n [5610-2050](#)
- LC/MS and GC/MS 7890/8890 General Kit (designed for U.S. labs doing both LC/MS and GC/MS analyses)  
p/n [5610-2051](#)
- LC/MS and GC/MS 7890/8890 Canada Kit (designed for Canadian labs doing both LC/MS and GC/MS analyses)  
p/n [5610-2052](#)
- LC/MS and GC/MS Intuvo 9000 Kit (designed for labs doing both LC/MS and GC/MS analyses with an Agilent Intuvo 9000)  
p/n [5610-2053](#)

## Agilent CrossLab: Supporting your success

CrossLab is an Agilent capability that integrates services and consumables to support workflow success, improve productivity, and enhance operational efficiency. Through CrossLab, Agilent strives to provide insight in every interaction to help you optimize the return you get on your instrument investment and achieve your business goals. Agilent CrossLab supports Agilent instruments and select non-Agilent instruments as well. We also provide consultative support for workflow enablement, lab analytics, regulatory compliance, inventory management, and asset management, including relocation services.

Learn more about CrossLab at [www.agilent.com/crosslab](http://www.agilent.com/crosslab)

Learn more:

[www.agilent.com/chem/cannabiskit](http://www.agilent.com/chem/cannabiskit)

Find a local Agilent customer center in your country:

[www.agilent.com/chem/contactus](http://www.agilent.com/chem/contactus)

Learn more about Agilent Application services:

[www.agilent.us/chem/method-applications-development](http://www.agilent.us/chem/method-applications-development)

U.S. and Canada

**1-800-227-9770**

**[agilent\\_inquiries@agilent.com](mailto:agilent_inquiries@agilent.com)**

Europe

**[info\\_agilent@agilent.com](mailto:info_agilent@agilent.com)**

Asia Pacific

**[inquiry\\_lsca@agilent.com](mailto:inquiry_lsca@agilent.com)**

Agilent products and solutions are intended to be used for cannabis quality control and safety testing in laboratories where such use is permitted under state/country law.

DE44461.5150925926

This information is subject to change without notice.

© Agilent Technologies, Inc. 2021  
Printed in the USA, September 30, 2021  
5994-4208EN

