

Confidently Test the Potency, Quality and Safety of Cannabis Products

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

Cannabis and hemp potency testing

Regions that have legalized medicinal or recreational marijuana use typically require cannabinoid quantitation for total tetrahydrocannabinol (THC) and cannabidiol (CBD). The Agilent Potency Consumables Kit contains everything you need to analyze 400 cannabis flower and hemp samples, starting with sample preparation.

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 everything you need to detect these substances in 400 samples.

Residual solvent testing

Residual solvents are by-products found in processed cannabis. Producers need to incorporate stringent protocols to ensure acceptable levels for their cannabis concentrates, distillates and extracts.

Terpene analysis

Terpenes contribute to the flavor and fragrance of cannabis, and have been used to identify and characterize cannabis cultivars. Regularly reproducing the same terpene profile is key to product consistency.

Heavy metal screening

Contamination with heavy metals such as arsenic, lead, cadmium, and mercury pose a danger to human health, so thorough testing is essential. The Agilent 7800 ICP-MS analyzer includes a consumables starter kit for cannabis analysis—including standards, peristaltic pump tubing, and autosampler tubes. So you can start producing results quickly.

Here's how this guide makes ordering simple

To add items to your "My Favorites" list at the Agilent online store, simply click the MyList link. Then, enter the quantities for the products you need. Your list will remain under "My Favorites" for your use with future orders.

First time using "My Favorites"? 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.

Selection and Ordering Information

Agilent Cannabis and Hemp Potency Testing

These products can be used to run the methods described in the following application notes and e-method.

Application notes:

[5991-9285EN](#) Dedicated Cannabinoid Potency Testing Using the Agilent 1220 Infinity II LC System (available as e-method G5277#010)

[5994-0912EN](#) Quantification of Cannabinoids in Industrial Hemp Using the Agilent 1220 Infinity II LC System

[5994-1706EN](#) Quantitation of Phytocannabinoid Oils Using the Agilent Infinity II 1260 Prime/InfinityLab LC/MSD iQ LC/MS System

E-method:

[G5277#010](#)

Sample Preparation and Sample Containment

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

Description	Part Number
Captiva premium syringe filter, regenerated cellulose (RC) membrane, 4 mm diameter, 0.45 µm pore size, 100/pk	5190-5107
Captiva disposable syringe, 5 mL, 100/pk	9301-6476
Ceramic homogenizers for 50 mL tubes, 100/pk	5982-9313
Centrifuge tubes, 50 mL, 25/pk	5610-2049
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

Potency Standards

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

Description	Part Number
Cannabinoid Mix A - CBD, CBN, D9-THC	5190-9430
Cannabinoid Mix B - THCA, CBDA, CBG	5190-9429
Cannabinoid Mix C - CBDV, CBGA, CBC	5190-9428
Cannabinoid Mix D - THCV, delta8-THC	5190-9427
Cannabidiarin (CBDV)	5191-3920
Tetrahydrocannabinol (delta8-THC)	5191-3921
delta8-Tetrahydrocannabinol (delta8-THC)	5191-3922
Cannabigerol (CBG)	5191-3923
Cannabidiol (CBD)	5191-3924
delta9-Tetrahydrocannabinolic acid (THCA)	5191-3925
Cannabinol (CBN)	5191-3926
Cannabigerol Acid (CBGA)	5191-3927
Cannabichromene (CBC)	5191-3928
delta9-Tetrahydrocannabinol (delta9-THC)	5191-3929
Cannabidiolic Acid (CBDA)	5191-3930

Potency consumables kits

Order your kit now, using the following link:

Cannabis and Hemp Potency Consumables Kit: p/n [5610-2036](#)

LC Columns and Supplies

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

Description	Part Number
InfinityLab Poroshell 120 EC-C18, 3.0 x 50 mm, 2.7 µm, LC column	699975-302
InfinityLab Poroshell 120 EC-C18, 3.0 mm, 2.7 µm, UHPLC guard, 3/pk	823750-911
Formic acid, 5 mL	G2453-85060
InfinityLab Ultrapure LC/MS acetonitrile	5191-4496
InfinityLab Ultrapure LC/MS methanol	5191-4497
InfinityLab Ultrapure LC/MS water	5191-4498
InfinityLab Quick Connect assembly, 0.12 x 105 mm, for connection at column inlet on UHPLC systems	5067-5957
InfinityLab Quick Connect assembly, 0.17 x 105 mm, for connection at column inlet on HPLC systems	5067-6166
InfinityLab Quick Turn fitting, for connection between column outlet and detector	5067-5966
InfinityLab Quick Turn capillary, 0.12 x 280 mm, for column outlet	5500-1191
InfinityLab Stay Safe starter kit, including 3 caps GL45 1 port and 1 cap GL45 2 ports, 4 venting valves with time strips and 4 fittings 3.2 mm	5043-1222
InfinityLab solvent filtration assembly includes glass funnel, 250 mL, membrane holder glass base, glass flask, 1 L, and aluminum clamp	5191-6776*
Regenerated cellulose membrane 47 mm, 0.20 µm 100/pk	5191-4340*

*Solvent filtration assembly and associated filter membranes are not recommended for use with InfinityLab Ultrapure LC/MS solvents.

Agilent provides guidance in helping you meet your analytical challenges. Both customized and prepackaged (p/n: [R4502A](#)) application services for cannabis potency testing are available. [Learn more](#)

Pesticides and Mycotoxins Testing of Cannabis Flower

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. These products can be used to run the methods described in the following application notes and e-methods.

Application notes:

- [5994-0648EN](#) Determination of Pesticides and Mycotoxins as Defined by California State Recreational Cannabis Regulations
- [5994-1019EN](#) A Fast Analysis of the GC/MS/MS Amenable Pesticides Regulated by the California Bureau of Cannabis Control
- [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 with 1290/6470 LC/TQ and G5278#030 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)
- [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)
- [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 with the 1260/Ultivo LC/TQ and G5279#020 with the 1260/6470 LC/TQ system)

E-methods:

- [G5279#010](#) [G5278#030](#)
- [G5279#020](#) [G5279#030](#)

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
J&W HP-5ms Ultra Inert GC column, 15 m, 0.25 mm, 0.25 µm	19091S-431UI*
J&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	CP17988
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 MyList of California mixes and standards	
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
Etoxazol	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 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
Chlormequat chloride	PST-2870M100A01
Etoxazol	PST-2265K100A01
Fludioxonil	PST-2340A100A01
Naled (Systhane) (Dibrom)	PST-730A1000
Phenothrin	PST-2700M100A01
Trifloxystrobin	PST-2630A100A01
View MyList of Nevada mixes and standards	
Nevada pesticides standard 1	SNV-100-1
Azoxystrobin	PST-1905A100A01
Chlorfenapyr	PST-2120M100A01
View MyList of Colorado mix	
Colorado pesticides standard	SCO-100-1

*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
J&W HP-5ms Ultra Inert Intuvo GC column module, 15 m, 0.25 mm, 0.25 µm	19091S-431UH-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

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](#)

Selection and Ordering Information

Residual Solvents Analysis of Cannabinoid Products

Residual solvent analysis of cannabinoid products is not akin to USP <467> and requires a unique analytical approach specific to cannabinoid products. These products can be used to run the methods described in the following application note.

Application note

[5994-1926EN](#) Novel Residual Solvents Analysis of Cannabinoid Products with the Agilent Headspace-GC/MS System (available as eMethod G5280#010)

Intuvo Columns and Supplies

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

Description	Part Number
DB-Select 624 Ultra Inert column (30 m x 0.25 mm x 1.4 µm)	122-0334UH-INT
Polyimide gasket, gasket, 5/pk	5190-9072
Intuvo MMI Guard Chip, 2/pk	G4587-60665
Mid-column backflush chip	G4588-60721
Flow Chip, detector tail, HES MS	G4590-60109
Compression bolt, Intuvo	G4581-60260

GC Columns and Supplies for 7890/8890/8860*

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

Description	Part Number
DB-Select 624 Ultra Inert Column (30 m x 0.25 mm x 1.4 µm)	123-0334UI
Gold plated inlet seal with washer, Ultra Inert, 10/pk	5190-6145
Column nut, collared, self tightening, inlet/detector	G3440-81011
Column nut, collared, self tightening, MSD	G3440-81013
Ferrule, 0.4mm id, 15% graphite/85% Vespel, 0.1-0.25 mm column, 10/pk	5181-3323

*The method has not been tested on these instruments

GC/MS and Autosampler Supplies

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

Description	Part Number
Inlet liner, Ultra Inert, split, low pressure drop, 4 mm id, 1/pk	5190-2295
Inlet liner, Ultra Inert, split, low pressure drop, 4 mm id, 5/pk	5190-3165
Inlet septa, bleed and temperature optimized (BTO), Non-Stick, 11 mm, 50-pack	5183-4757
Inlet septa, bleed and temperature optimized (BTO), Non-Stick, 11 mm, 100-pack	5183-4757-100
Sample Loop, headspace, 0.5 mL, inert	G4556-80105
Sample probe, deactivated, for Agilent 7697A headspace sampler	G4556-6325
High temperature filament, EI ion source	G7005-60061
9mm GC/MS extractor lens	G3870-20449
Gas tight syringe, 10 µL (for 7697A headspace sampler)	5181-3354
Gas tight syringe, 25 µL (for 7697A headspace sampler)	5183-0316
Gas tight syringe, 100 µL (for 7697A headspace sampler)	5183-2058
Syringe, 100 µL, fixed needle, 23/42/cone	5183-2042
ALS Syringe, 100 µL, fixed needle, 23-26s/42/cone	5183-2042
Gas tight syringe, 250 µL (for 7697A headspace sampler)	G4513-60560

Vials and Caps

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

Description	Part Number
20 mm flat bottom glass crimp top headspace vials, clear, graduation marks and write-on spot	5190-2288
20 mm crimp caps steel/high temperature septa, headspace, 100/pk	5190-3987
20 mm flat bottom glass crimp top headspace vials, amber, graduation marks and write-on spot	5190-2286
20mm crimp cap, headspace, aluminum, PTFE/silicone septa (100/pk)	5183-4477
20 mm vial crimper	5191-5615
20 mm vial decapper	5191-5613

Standards

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

Description	Part Number
Residual solvent standard cannabis-Universal mix	RSC-100-1
California residual solvent mix 1	SCA-300-1
California residual solvent mix 2	SCA-301-1
California residual solvent mix 3	SCA-312-1
Oregon residual solvent mix	SOR-125-1

Gas Purification System

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

Description	Part Number
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
Gas kit for Intuvo	CP17995

Selection and Ordering Information

Terpenes Analysis in Cannabis Products by Direct Injection

The most common approach to terpenes analysis is headspace chromatography (GC) with flame ionization detection (FID), mass spectrometry (MS) or both (FID/MS). This approach, however, may result in loss of sesquiterpenoids like alpha-bisabolol in high-potency cannabis samples. Terpene analysis using liquid injection overcomes this problem. These products can be used to run the methods described in this application note.

Application note:

[5994-2032EN](#) Terpenes Analysis in Cannabis Products by Liquid Injection Using the Agilent Intuvo 9000/5977B GC/MS System (available as e-method G5282AA#010)

Intuvo Columns and Supplies

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

Description	Part Number
DB-Select 624 Ultra Inert column (30 m x 0.25 mm x 1.4 um)	122-0334UI-HNT
Polyimide gasket, 5/pk	5190-9072
Intuvo MMI Guard Chip, 2/pk	G4587-60665
Mid-column backflush chip	G4588-60721
Flow Chip, detector tail, HES MS	G4590-60109
Compression bolt, Intuvo	G4581-60260

GC Columns and Supplies for 7890/8890/8860*

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

Description	Part Number
DB-Select 624 Ultra Inert Column (30 m x 0.25 mm x 1.4 um)	123-0334UI
Gold plated inlet seal with washer, Ultra Inert, 10/pk	5190-6145
Column nut, collared, self tightening, inlet/detector	G3440-81011
Column nut, collared, self tightening, MSD	G3440-81013
Ferrule, 0.4mm id, 15% graphite/85% Vespel, 0.1-0.25 mm column, 10/pk	5181-3323

*The method has not been tested on these instruments

Vials and Caps

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

Description	Part Number
Vials screw cap, 1.8 mL	5188-6535
12mm screw cap, green, PTFE/silicone/PTFE septa, 100/pk	5182-0724

Standards

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

Description	Part Number
Terpenes Kit	WRK-105
Universal Terpene Mix 1 for Cannabis	TPM-105-1
Universal Terpene Mix 2 for Cannabis	TPM-100-1
Universal Terpene Mix 3 for Cannabis	TPM-110-1
Nevada Terpene Mix for Cannabis testing	SNV-105-1

GC/MS Supplies

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

Description	Part Number
Inlet liner, Ultra Inert, split, low pressure drop, 4 mm id, 1/pk	5190-2295
Inlet liner, Ultra Inert, universal, low pressure drop, 4 mm id, 5/pk	5190-3165
Inlet septa, bleed and temperature optimized (BTO), Non-stick, 11mm, 50/pk	5183-4757
ALS syringe, blue line, 10 uL, fixed needle, 23/42/cone, PTFE-tip plunger	G4513-80220
High temperature filament, EI ion source	G7005-60061
9mm GC/MS extractor lens	G3870-20449

FID Supplies

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

Description	Part Number
FID jet, universal fit, 0.29mm (0.011inch) id capillary	5200-0176

Gas Clean Purification System

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

Description	Part Number
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
Gas kit for Intuvo	CP17995

Selection and Ordering Information

Heavy Metals Analysis

These products can be used to run the methods described in the following application note.

Application note:

[5991-8482EN](#) Multi-Element Analysis of Cannabis and Hemp using ICP-MS (available as eMethod G5280#010)

Standards

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

Description	Part Number
Initial calibration verification	5183-4682
Environmental spike mix	5183-4687
Environmental calibration standard	5183-4688
ICP-MS internal standard mix	5188-6525
ICP-MS stock tuning solution (100 mL)	5188-6564
Mercury, 1000 ug/ml, 100ml	5190-8485
Mercury calibration standard	8500-6941

ICP-MS Columns and Supplies

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

Description	Part Number
Peri pump tube 3-stop white/white 12/pk	G1833-65569
Peri pump tube Ismaprene 3-stop yellow/blue	G1833-65570
Peri pump tube Tygon 2-stop blue/org 12/pk	G3280-67047
Tube 16.5 ml 130 x 17 mm polypropylene	00000001600L
Centrifuge tubes polypropylen 50 mL, 500/pk	190065200
Peri pump tube PVC 3 tab black/black 12/pk	5064-8101

Agilent CrossLab services

CrossLab is an Agilent capability that integrates services and consumables to support workflow success and important outcomes like improved productivity and operational efficiency. Through CrossLab, Agilent strives to provide insight in every interaction to help you achieve your goals. CrossLab offers method optimization, flexible service plans, and training for all skill levels. We have many other products and services to help you manage your instruments and your lab for best performance.

Learn more about Agilent CrossLab, and see examples of insight that leads to great outcomes, at www.agilent.com/crosslab



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