Agilent

Trusted Answers

Agilent Cannabis and Hemp Potency Kit

p/n 5610-2036

User Guide



Congratulations on taking a big step in cannabinoid analysis for cannabis flower and hemp samples. Through the purchase of the Agilent Cannabis and Hemp Potency Kit, you have received the necessary consumables and resources to get up and running—fast.

This guide provides additional information about each of the parts included in your kit, and is broken into the following sections:

Sample preparation

Includes p/n:

5190-5107

9301-6476

5982-9313

5610-2049

Sample containment

Includes p/n:

5183-2072

5182-0718

Instrument supplies

Includes p/n:

G2453-85060

Separation

Includes p/n:

699975-302





Cannabis and Hemp Potency Kit, p/n 5610-2036

Sample preparation

Captiva premium syringe filter, regenerated cellulose (RC) membrane, 4 mm diameter, 0.45 µm pore size, 100/pk

Qty: 4
p/n 5190-5107

Captiva disposable syringe, 5 mL, 100/pk

Qty: 4
p/n 9301-6476

Filtering samples before analysis can help you achieve longer column life, maximize uptime, improve sample integrity, and maximize instrument performance. Particulates from your cannabis flower or hemp samples can cause high backpressure, retention-time shift, resolution loss, and shorter column life. Agilent Captiva syringe filters remove particulates and are ideal for simple mechanical filtration. Captiva syringes and syringe filters are intended to be one-time use and should be disposed of after use.

Step-by-step instructions

Follow these steps to realize the full benefits of filtration.



Before filling with sample, draw approximately 1 mL of air into the syringe. This will minimize fluid retention.

Draw your sample into the syringe, then draw in approximately 1 mL of air. Invert the syringe and wipe any residue off its tip.

Connect the syringe to the syringe filter using a luer connection. Twist gently to ensure a secure seal.

Filter syringe contents into a vial. Then, remove the syringe filter, draw air into the syringe, re-attach the syringe filter, and press the plunger to filter the residual sample. This will maximize sample recovery.

Warning: Use caution with syringes smaller than 10 mL. They can easily generate enough pressure to burst the syringe filter. Agilent syringe filters are for laboratory use only. Pre-wetting the filter, while not mandatory, can be performed as an extra step.



Ceramic homogenizers for 50 mL tubes, 100/pk

Qty: 8
p/n 5982-9313

Ceramic homogenizers are used to grind your cannabis sample via vertical shaking. They make analyte extraction easier by:

- Increasing extraction efficiency
- Maintaining reproducible extractions
- Minimizing grinding/extraction variance between users

Use two ceramic homogenizers per sample. Ceramic homogenizers are intended to be one-time use and should be disposed of after use.



Centrifuge tubes, 50 mL, 25/pk

Qty: 16
p/n 5610-2049

Potency testing for cannabis flower and hemp samples requires an initial 100-fold dilution, making Agilent centrifuge tubes (50 mL) a must for your cannabis sample preparation. When using these tubes, do not over tighten the caps. These tubes are designed to seal with minimal tightening, and can leak if overtightened. For the best seal, ensure that the sealing surface is mostly free of powders/ sample/liquid before placing the cap on the tube.

Sample containment



Vial, screw top, amber, write-one spot, deactivated (silanized), certified, 2 mL, 100/pk

Qty: 4
p/n 5183-2072

Screw top vials are a great alternative to crimp cap vials and eliminate the need for a manual or automatic crimper. The amber color is necessary for cannabis samples that may have sensitive compounds (semivolatile organic compounds that are sensitive to temperature or are known to degrade over time when in a mixture). The amber vial reduces the risk of analyte loss due to exposure to light.



Cap, screw, green, PTFE/red silicone septa, 100/pk

Qty: 4
p/n 5182-0718

This cap features a PTFE/red silicone septum that is compatible with most solvents. PTFE is least likely to interact with the sample and less likely to extract siloxanes into the sample that can then interfere chromatographically with your analytes of interest. Screw caps are easier to use, and eliminate the need for a manual or automatic crimper. Plus, you do not need to worry about analyte loss from over- or undercrimping the cap.

Instrument supplies

Formic acid (mobile phase modifier), 1 × 5 mL vial

Qty:1
p/n G2453-85060

Agilent formic acid is a high-quality mobile phase modifier that helps improve your overall chromatography. Mobile phase modifiers help to:

- Improve peak shape by minimizing unwanted interactions between the analyte and the column stationary phase.
- Increase sensitivity by improving ionization.
- Control analyte ionization state, which can be used to achieve baseline resolution and separate isobars and/or matrix components from your sample.



Separation

InfinityLab Poroshell 120 EC-C18, 3.0 × 50 mm, 2.7 µm LC column

Qty: 1

p/n 699975-302

This is your main liquid chromatography column that separates your analytes from other molecules present in the sample. Separation of analytes from other, irrelevant components is key to reliable detection and quantification of your components. Endcapped (EC) C18 is the most common reversed-phase column chemistry, and provides excellent separation for cannabinoid analysis. With proper care and sample preparation, your LC column will last for more than 400 injections. Use LC guard columns to extend the column's duration even further.

How to connect your LC column

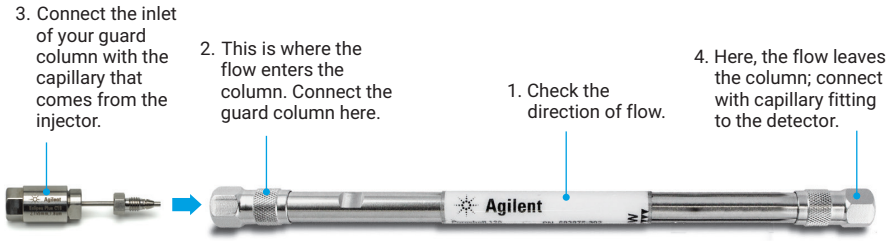

Figure 1. How to connect your LC column. A guard column is not required for this analysis, but can be used to further extend the life of your column.

Want to customize your kit?

Use these items to optimize your specific workflow.

Sample Containment	Part No.
Vial insert, 250 µL, deactivated glass with polymer feet, 100/pk	5181-8872
LC Analysis	**Part No.**
InfinityLab Poroshell 120 EC-C18, 3.0 mm, 2.7 µm, UHPLC guard, 3/pk	823750-911
InfinityLab ACN, 1 L	5191-4496
InfinityLab MeOH, 1 L	5191-4497
InfinityLab water, 1 L	5191-4498
InfinityLab Quick Connect assembly, 0.12 × 105 mm, for column inlet connection on UHPLC	5067-5957
InfinityLab Quick Connect assembly, 0.17 × 105 mm, for column inlet connection on UHPLC	5067-6166
InfinityLab Quick Turn fitting, for column outlet	5067-5966
InfinityLab Quick Turn capillary 0.12 × 280 mm, for connection from column to detector	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 3.2mm	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 Filter membrane 47 mm, 0.20 µm 100/pk	5191-4340*

* Solvent filtration assembly and associated filter membranes are not recommended for use with Agilent InfinityLab solvents (p/n 5191-4496, p/n 5191-4497, and p/n 5191-4498).

Visit our ordering guide at www.agilent.com/chem/CannabisKitOrdering. There, you can:

- Use our *MyList* links to find recommendations for sample preparation, sample containment, and analysis.
- Build a *MyFavorites* list and eliminate the hassle of entering individual part numbers when you re-order.

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/county law.

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