

# Confidently Test the Safety of Cannabis Products

Agilent columns and supplies recommended for analyzing 21 residual solvents in cannabinoid products.

## Residual solvent testing

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

Residual Solvent Analysis of Cannabinoid Products is not akin to USP <467> and requires a unique analytical approach specific to cannabinoid products.

This guide includes links for the recommended columns and supplies required for running the method described in the following application note and e-method:

- **5994-1926EN** Novel Residual Solvents Analysis of Cannabinoid Products with the Agilent Headspace-GC/MS System (available as e-method G5280#010 or **M5658AA**)

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.

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

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If this is your first time using *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 channel.

## Residual solvents analysis of cannabinoid products



### 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)**	122-0334UI-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

\*\*Qty=2 required for setup

### 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, 0.4 mm id, 15% graphite/85% Vespel, 0.1–0.25 mm column, 10/pk	5181-3323

\*The method has not been tested on these instruments

\*\*Qty=2 required for setup

### 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
20 mm 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
<b>California Cannabis residual solvent kit (2020)</b>	RSC-CBS-CA
California Cannabis residual solvent mix 1	RSC-CBS-CA1
California Cannabis residual solvent mix 2A	RSC-CBS-CA2
Ethylene Oxid	RSC-CBS-CA3
Universal residual solvent mix	RSC-CBS-UNI
Canada Cannabis residual solvent mix (2020)	RSC-CBS-CAN
Oregon Cannabis residual solvent mix (2020)	RSC-CBS-OR
<b>Colorado Cannabis residual solvent kit (2020)</b>	RSC-CBS-CO
Colorado Cannabis residual solvent mix 1	RSC-CBS-CO1
Colorado Cannabis residual solvent mix 2	RSC-CBS-CO2

## 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
9 mm 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) Syringe, 100 µL, fixed needle, 23/42/cone	5183-2058
Gas tight syringe, 100 µL (for 7697A headspace sampler) ALS Syringe, 100 µL, fixed needle, 23-26s/42/cone	5183-2042
Gas tight syringe, 250 µL (for 7697A headspace sampler)	G4513-60560

## 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

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

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Asia Pacific

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

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