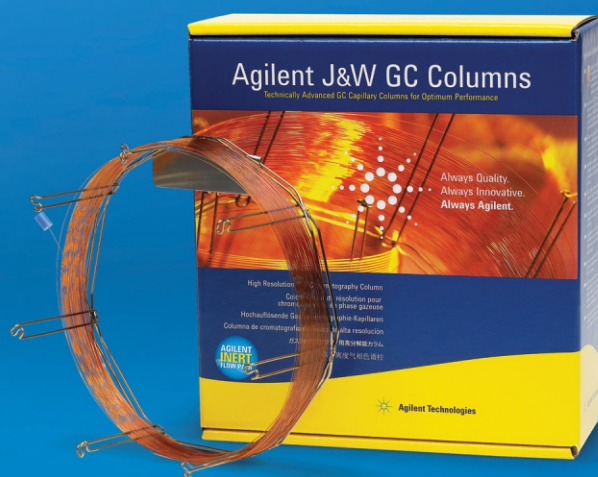


# Increase Your Analytical Confidence For Challenging Polar Compounds

Agilent J&W DB-WAX Ultra Inert GC columns



# Now You Can Achieve Better Peak Shape and Reproducibility for Challenging Polar Compounds

GC columns with polyethylene glycol (PEG) stationary phases are commonly used for analyzing compounds with polar functional groups. They are well suited for food, flavor, and fragrance applications, as well as industrial chemical analysis in quality control and method development labs.

For active and complex polar compounds, you cannot afford adsorption caused by flow path activity. Having to repeat or verify suspect analyses wastes valuable resources, hinders productivity, and hurts your bottom line. Unreliable results can also have serious implications in the quality of the foods we eat and the products that consumers and businesses use every day.

## Perform worry-free analysis of polar compounds with NEW Agilent J&W DB-WAX Ultra Inert GC columns

With their Durabond polyethylene glycol stationary phase and proprietary processing, DB-WAX Ultra Inert GC columns deliver excellent inertness with greater sensitivity than any other WAX column on the market. These innovative columns let you:

### **Spend less time on troubleshooting and reruns:**

With DB-WAX UI GC columns, you can count on excellent peak shape and column-to-column inertness reproducibility, as well as retention time stability.

### **Save money on columns and maintenance:**

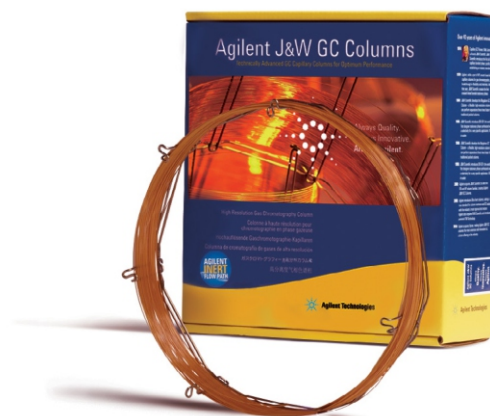
DB-WAX UI has extended inertness lifetime that withstands repeated temperature cycling to the upper temperature limits of the column.

### **Stop wasting time prequalifying columns:**

Specific inertness testing during quality control guarantees out-of-the-box inertness performance for every DB-WAX UI column.

## Implement easily, with minimal workflow interruption:

DB-WAX UI GC columns have the same selectivity as DB-WAX GC columns. This capability makes upgrading to Ultra Inert performance easy, with minimal validation. What's more, there's no need to recreate or modify existing compound libraries that are based on DB-WAX selectivity.

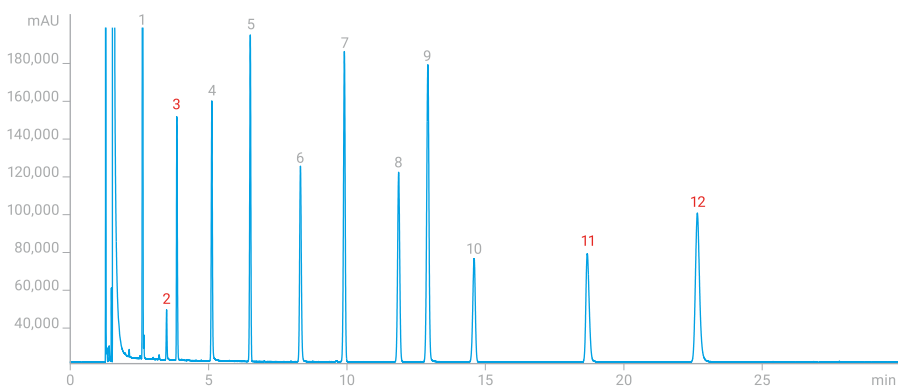




## Trust Ultra Inert GC columns for your trace-level analysis of active analytes

DB-WAX UI GC columns are part of the Agilent J&W Ultra Inert GC column family, which pushes industry standards for consistent column inertness. Every Ultra Inert GC column is rigorously tested to ensure optimal active analyte delivery to the GC or MS detector. The result: optimal, lower detection limits and more accurate identification of challenging polar analytes.

DB-WAX Ultra Inert test mix



**Peak identification:**

- 1. 2-Nonanone
- 2. Decanal
- 3. Propionic Acid
- 4. Ethylene Glycol
- 5. Heptadecane
- 6. Aniline
- 7. Methyl Dodecanoate
- 8. 2-Chlorophenol
- 9. 1-Undecanol
- 10. Nonadecane
- 11. 2-Ethylhexanoic Acid
- 12. Ethyl Maltol

**Test conditions:**

Carrier Gas: Hydrogen, @ 41.37 cm/s  
 Injection: 1 µL, Split @ 250 °C  
 Oven: 130 °C Isothermal  
 Detector: FID, 260 °C, H<sub>2</sub>, 30 mL/min, Air 300 mL/min, N<sub>2</sub> make-up gas 35 mL/min

DB-WAX Ultra Inert GC test mix contains strong inertness probes including decanal, propionic acid, 2-ethylhexanoic acid, and ethyl maltol to ensure consistent inertness for challenging flavor compounds.

## Proof of inertness: the DB-WAX Ultra Inert test mix

A strong test probe mixture can highlight deficiencies in column activity, while a weak mixture can actually mask such deficiencies. Like all of Agilent's Ultra Inert GC columns, DB-WAX UI GC columns are tested with the industry's most demanding test probe mixture based on real-world requirements and we prove it with a performance summary sheet shipped with each column.

In addition, the DB-WAX Ultra Inert test probe mixture includes decanal, propionic acid, ethyl hexanoic acid, and ethyl maltol to ensure inertness performance for these active polar compounds.

# Excellent Peak Shape for Acidic Compounds

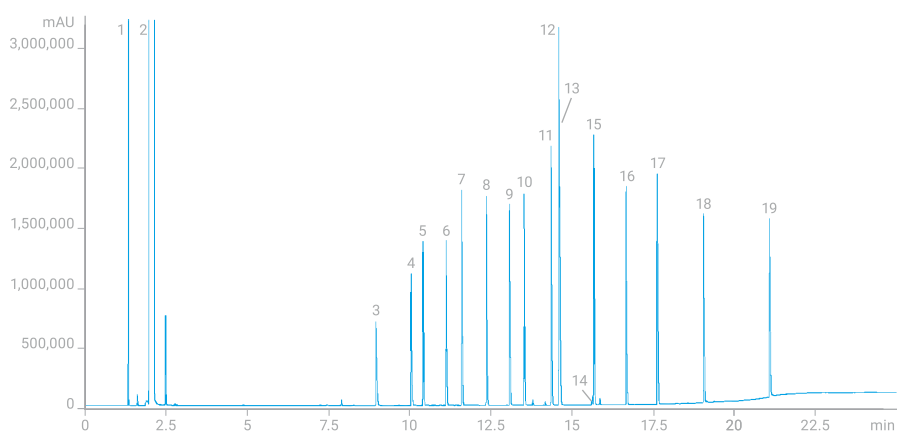


With DB-WAX UI GC columns, there is no need to run a separate FFAP column. You can standardize on DB-WAX UI to broaden your application range.

## Competitive comparison: free fatty acids

### DB-WAX Ultra Inert GC column

30 m x 0.25 mm id, 0.25  $\mu$ m (p/n 122-7032UI)



#### Peak identification:

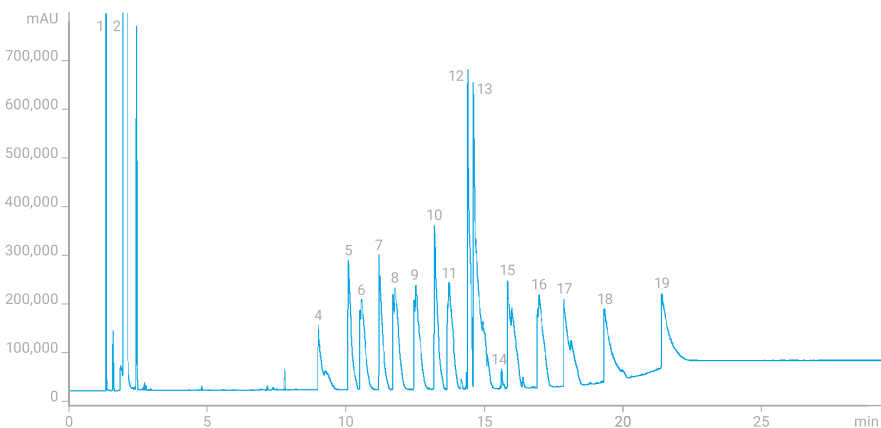
1. Methane
2. Acetone (solvent)
3. Acetic Acid
4. Propionic Acid
5. Isobutyric Acid
6. Butyric Acid
7. Isovaleric Acid
8. Valeric Acid
9. 4-Methylvaleric Acid
10. Hexanoic Acid
11. 4-Methylhexanoic Acid
12. 2-Ethylhexanoic Acid
13. Heptanoic Acid
14. Pyruvic Acid
15. Octanoic Acid
16. Nonanoic Acid
17. Decanoic Acid
18. Undecylenic Acid
19. Myristic Acid (Tetradecanoic)

#### Test conditions:

Carrier gas: Hydrogen @ 41.37 cm/s  
Injection volume: 1  $\mu$ L  
Inlet: Split @ 250 °C  
Oven program: 130 °C Isothermal  
Detector: FID @ 260 °C, H<sub>2</sub> 30 mL/min, Air 300 mL/min, N<sub>2</sub> make-up gas 35 mL/min

### Standard WAX GC column

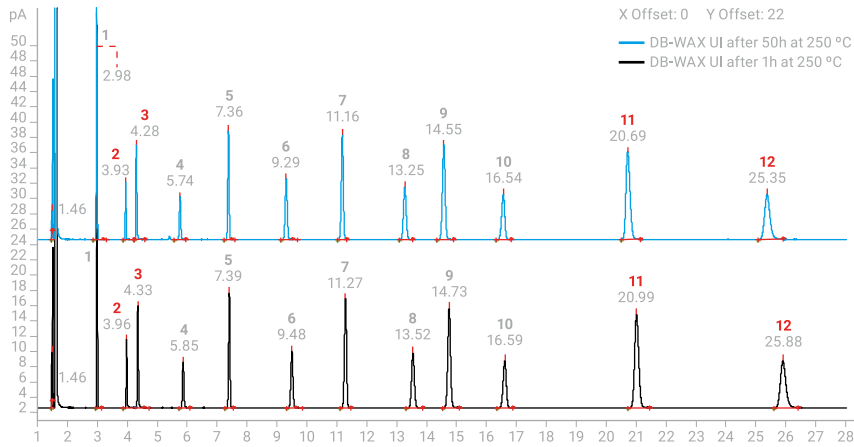
30 m x 0.25 mm id, 0.25  $\mu$ m



The DB-WAX UI GC column exhibits excellent peak shape for this mixture of free fatty acids, compared to a standard WAX capillary column.

## Competitive comparison: Stability at T max DB-WAX Ultra Insert versus StabilWAX and ZB-WAX plus

### Inertness of Agilent DB-WAX UI



Peak identification:

1. 2-Nonanone
2. Decanal
3. Propionic Acid
4. Ethylene Glycol
5. Heptadecane
6. Aniline
7. Methyl Dodecanoate
8. 2-chlorophenol
9. 1-Undecanol
10. Nonadecane
11. 2-Ethylhexanoic Acid
12. Ethyl Maltol

Test conditions:

Injector: 250 °C, Split 1:75  
Injection volume: 1 µL  
Flow rate: 1.1 mL/min, H<sub>2</sub> gas  
Oven program: 130 °C Isothermal  
Detector: FID @ 260 °C

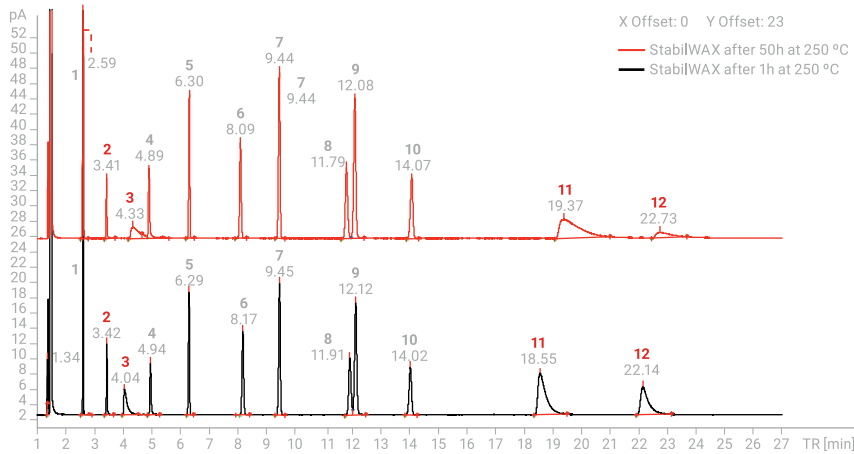
Application Note:  
A New PEG GC Column with Improved Inertness Reliability and Column Lifetime (5991-6683EN)

Even after 50 hours of exposure at the upper temperature range, the DB-WAX UI GC column demonstrated superior inertness and stability with minimal peak shifting.

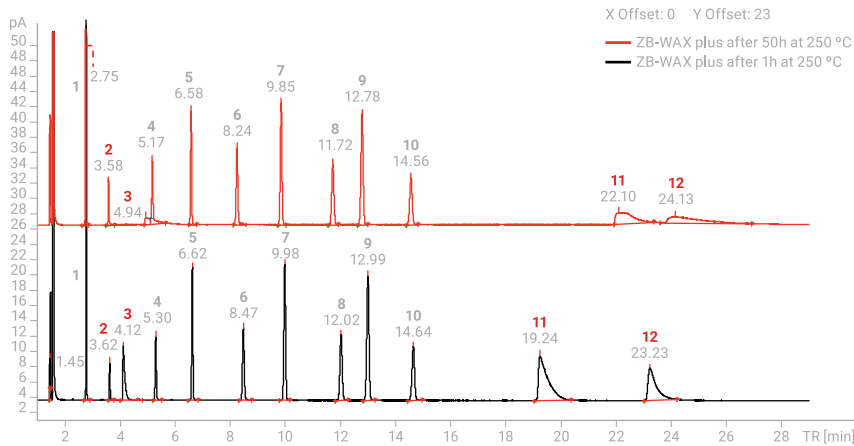
### High temperatures

In case your application requires higher maximum temperatures for your WAX column, Agilent J&W offers DB-HeavyWAX that has maximum temperature limits of 280 °C isothermal and 290 °C programmed. For more information visit [www.agilent.com/chem/db-heavywax](http://www.agilent.com/chem/db-heavywax)

### Inertness of Restek StabilWAX



### Inertness of Phenomenex ZB-WAX plus



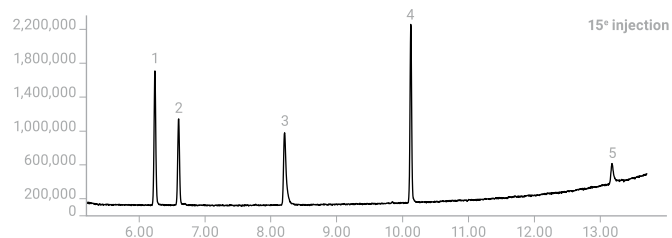
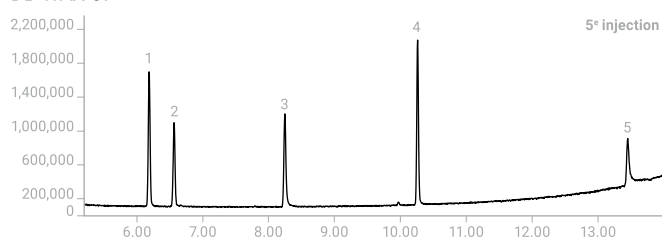
# Stable Inertness Performance for Alcohols and Glycols



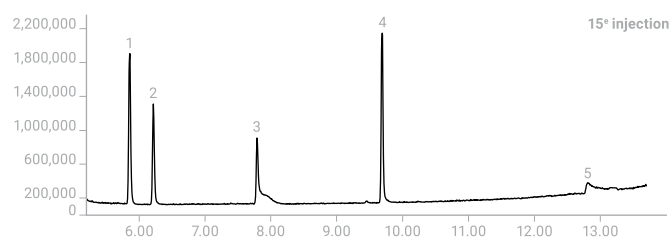
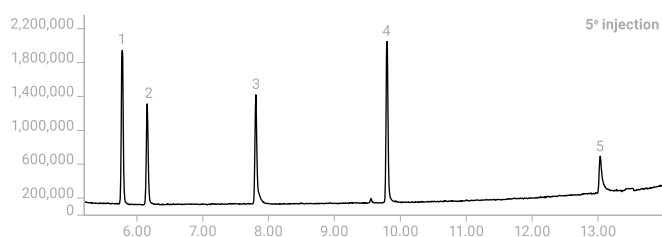
Glycol (diol) compounds are used in the manufacturing of consumer and industrial products, such as cosmetics, polyesters, paints, automotive coolant, cleaning solutions, and wood finishes. For these challenging compounds, Agilent J&W DB-WAX Ultra Inert GC columns deliver inertness and longevity, while maintaining DB-WAX selectivity.

## Analysis of diethylene glycol (DEG) and ethylene glycol (EG) in toothpaste

### DB-WAX UI



### Brand R WAX ms



DB-WAX UI GC columns meet strict analytical standards for detecting trace levels of diethylene glycol (DEG) and ethylene glycol (EG). Both are known poisons that are commonly used as industrial solvents and in antifreeze solutions.

#### Peak identification:

- 1,2-Propanediol
- EG
- 1,3-Propanediol
- DEG
- Glycerin

#### Test conditions:

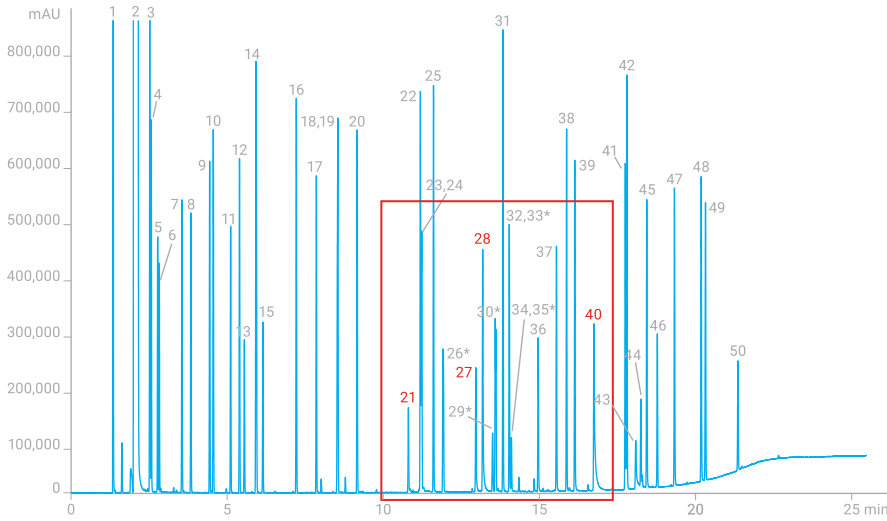
Column: DB-WAX UI, 30 m x 0.25 mm, 0.25  $\mu$ m (p/n 122-7032UI)  
Tubing: Agilent Ultimate Plus deactivated FS tubing, 5 m x 0.25 mm (p/n CP802505)  
Instrument: Agilent 7683B autosampler and sample tray, 5  $\mu$ L syringe (p/n G4513-80213)  
Injection volume: 1  $\mu$ L  
Carrier gas: Helium, 35 cm/s constant flow mode  
Inlet: Split/splitless @ 250  $^{\circ}$ C, split ratio 20:1  
Oven program: 100  $^{\circ}$ C (1 min) to 250  $^{\circ}$ C at 10  $^{\circ}$ C/min, 4 min hold  
MSD: Agilent 5977A MSD  
Solvent delay: 4 min  
MS temperature: 230  $^{\circ}$ C (source), 150  $^{\circ}$ C (quad)  
Transfer line: 250  $^{\circ}$ C, EI Scan 29 to 400 amu, EI mode Scan 29 to 400 amu

#### Application Note:

Analysis of Glycols in Toothpaste Using Agilent J&W DB-WAX Ultra Inert Capillary GC Column (5991-6637EN)

## Inertness comparison: DB-WAX Ultra Inert outperforms Brand G

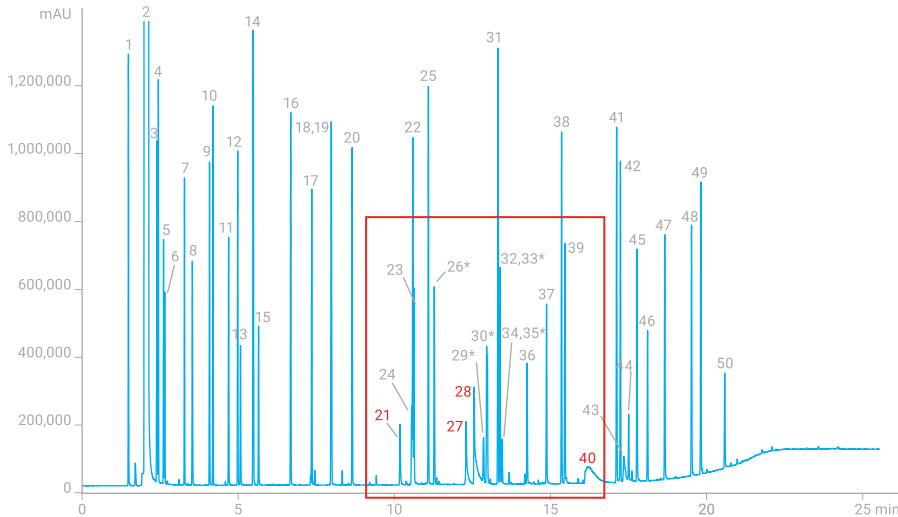
### Inertness of DB-WAX UI column: Alcohols and Glycols test mix



#### Peak identification:

1. Methane
2. Acetone (solvent)
3. Methyl Alcohol
4. tert-Butyl Alcohol
5. Isopropyl Alcohol
6. Ethyl Alcohol
7. tert-Amyl Alcohol
8. n-Propyl Alcohol
9. Isobutyl Alcohol
10. 2-Methyl-2-pentanol
11. n-Butyl Alcohol
12. 4-Methyl-2-pentanol (Methyl amyl alcohol)
13. 2-Methoxyethanol (Ethylene glycol monoethyl ether)
14. 3-Methyl-1-butanol (Isoamyl alcohol)
15. 2-Ethoxyethanol (Ethylene glycol ethyl ether)
16. Cyclopentanol
17. 1-Hexanol (n-Hexyl alcohol)
18. Cyclohexanol
19. 2-Butoxyethanol (Ethylene glycol monobutyl ether)
20. 1-Heptanol (n-Heptyl alcohol)
21. **Propylene glycol (1,2-Propanediol)**
22. 2-(2-Ethoxyethoxy)ethanol (Diethylene glycol monoethyl ether)
23. 2-Methyl-2,4-pentanediol (Hexylene glycol)
24. Ethylene glycol (1,2-Ethandiol, Glycol)
25. 1-Nonanol (n-Nonyl alcohol)
26. Glycerol formal (2 isomers)
27. **1,3-Propanediol (Trimethylene glycol)**
28. **Neopentyl glycol (2,2-Dimethyl-1,3-propanediol)**
29. Dipropylene glycol (\*1 of 3 isomers)
30. 2,5-Hexanediol (2 isomers)
31. 1-Undecanol (Undecyl alcohol)
32. 1,4-Pentanediol
33. Dipropylene glycol (\*2 of 3 isomers)
34. 1,2-Hexanediol
35. Dipropylene glycol (\*3 of 3 isomers)
36. Diethylene glycol (3-Oxa-1,5-pentanediol)
37. 1,5-Pentanediol (Pentylene glycol)
38. 1-Tridecanol (n-Tridecyl alcohol)
39. 2-Methyl-1,5-pentanediol
40. **Methyl neopentyl glycol (2,2-Dimethyl-1,3-propanediol)**
41. 1-Pentadecanol (n-Pentadecyl alcohol)
42. Anisyl alcohol ((4-Methoxyphenyl)methanol)
43. Glycerol (Glycerine, Glycerin, Propanetriol)
44. Triethylene glycol (Triglycol)
45. 1,8-Octanediol (Octamethylene glycol)
46. 1,4-Butanediol (Tetramethylene glycol)
47. 1,9-Nonanediol (Nonamethylene glycol)
48. 1,10-Decanediol (Decamethylene glycol)
49. Stearyl alcohol (1-Octadecanol, n-Octadecyl alcohol)
50. Tetraethylene glycol (Tetraglycol)

### Inertness of "Brand G" WAX column: Alcohols and Glycols test mix



#### Test conditions:

- Column: DB-WAX UI 30 m x 0.25 mm id, 0.25 µm (p/n 122-7032UI)
- Oven program: 40 °C (0.5 min), 10 °C/min to 250 °C, 4 min hold
- Carrier gas: Hydrogen, @ 1.487 mL/min constant flow
- Injection volume: 1 µL
- Inlet: Split 20:1 @ 250 °C
- Detector: FID @ 260 °C, H<sub>2</sub> 30 mL/min, Air 300 mL/min, N<sub>2</sub> make-up gas 35 mL/min
- Flow path supplies: Ultra Inert low pressure drop liner (p/n 5190-2295)
- Ultra Inert gold seal (p/n 5190-6144)
  - Self tightening column nut (p/n 5190-6194)
  - Graphite-vespel ferrules (p/n 5181-3323) 10 pk
  - Long-life septa (p/n 5183-4761)

The DB-WAX UI column shows superior performance, compared to the Brand G WAX column, for an extensive list of Alcohols and Glycols.

# Reliable, Robust Performance for Aqueous Samples

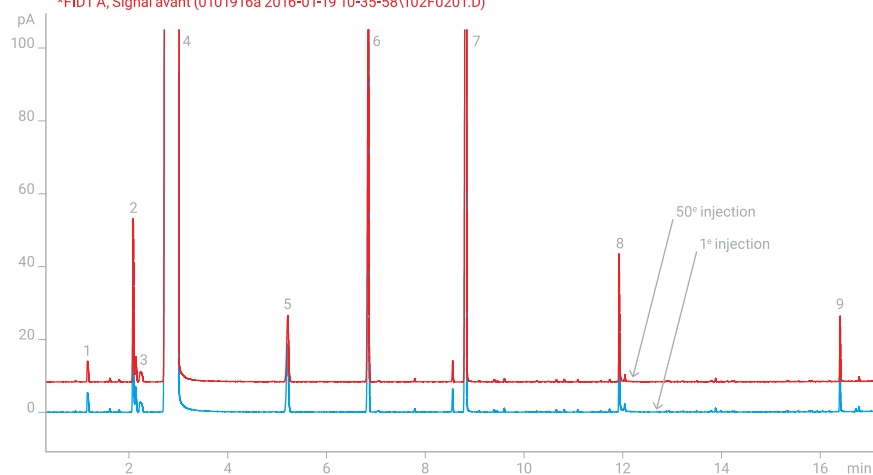


Agilent J&W DB-WAX Ultra Inert GC columns deliver extended longevity and a lower cost per analysis for beverages/spirits, glycols in water, and headspace applications. The bonded and cross-linked DB-WAX UI phase is solvent rinsable, and tolerates aqueous injections.

## Profile of Maker's Mark Whiskey

\*FID1 A, Signal avant (0101916a 2016-01-19 10-35-58\111F1105.D)

\*FID1 A, Signal avant (0101916a 2016-01-19 10-35-58\102F0201.D)



Retention time and peak shape remained stable over 50 injections of neat 90-proof whiskey.

### Peak identification:

1. Acetyl aldehyde
2. Ethyl acetate
3. Methanol
4. Ethanol
5. 1-propanol
6. Isobutyl alcohol
7. 2 methyl 1-butanol/3 methyl 1-butanol
8. Acetic acid
9. Phenylethyl alcohol

### Test conditions:

Column: DB-WAX UI 30 m x 0.25 mm x 0.25  $\mu$ m  
(p/n 122-7032UI)  
Injection volume: 0.5  $\mu$ L  
Inlet: Split 20:1 @ 225 °C  
Inlet liner: Ultra Inert low pressure drop liner  
with wool (p/n 5190-2295)  
Carrier gas: H<sub>2</sub> constant flow 2.5 mL/min  
Oven program: 35 °C, 5 min hold, 12 °C/min to 240 °C,  
5 min hold  
Detector: FID @ 260 °C

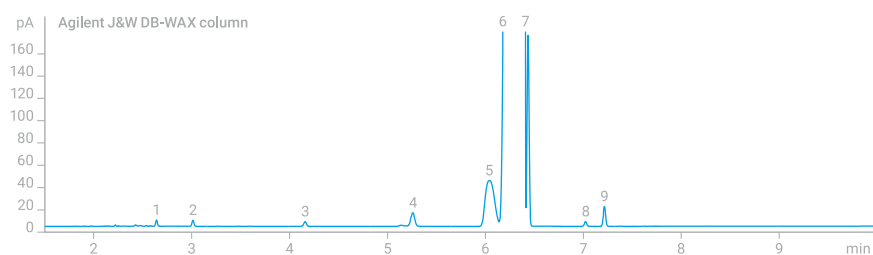
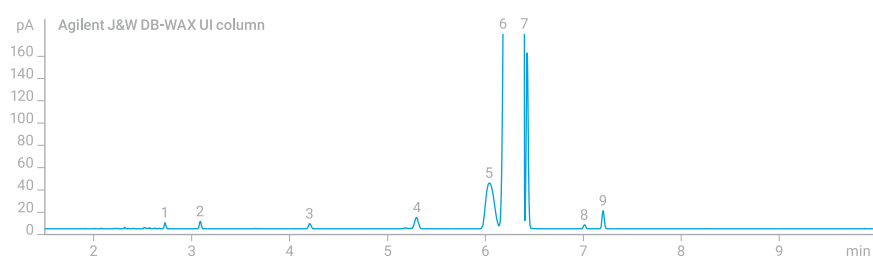
### Application Note:

Analysis of Distilled Spirits Using Agilent J&W DB-WAX Ultra Inert Capillary GC Column (5991-6638EN)

Bonded PEG stationary phase capillary columns are specified in numerous ASTM methods. These methods include the separation of isomeric solutes, as well as fast resolution of nonpolar saturated hydrocarbons from polar solutes in complex process streams.

Stringent Agilent testing procedures give you the confidence that every DB-WAX UI GC column you install will meet the industry's most demanding performance specifications.

#### Analysis of BTEX



#### Peak identification:

1. n-Nonane
2. benzene
3. toluene
4. n-Undecane(IS)
5. ethylbenzene
6. p-Xylene
7. m-Xylene
8. cumene
9. o-Xylene

#### Test conditions:

Columns: DB-WAX UI 30 m x 0.25 mm x 0.25  $\mu$ m (p/n 122-7032UI)  
DB-WAX 30 m x 0.25 mm x 0.25  $\mu$ m (p/n 122-7032)

Injection volume: 0.1  $\mu$ L

Inlet: Split 80:1 @ 220  $^{\circ}$ C

Carrier gas: Helium @ 1.3 mL/min (constant flow)

Oven program: 65  $^{\circ}$ C for 6 min to 210  $^{\circ}$ C @ 25  $^{\circ}$ C/min and 4 min hold

Detector: FID @ 250  $^{\circ}$ C

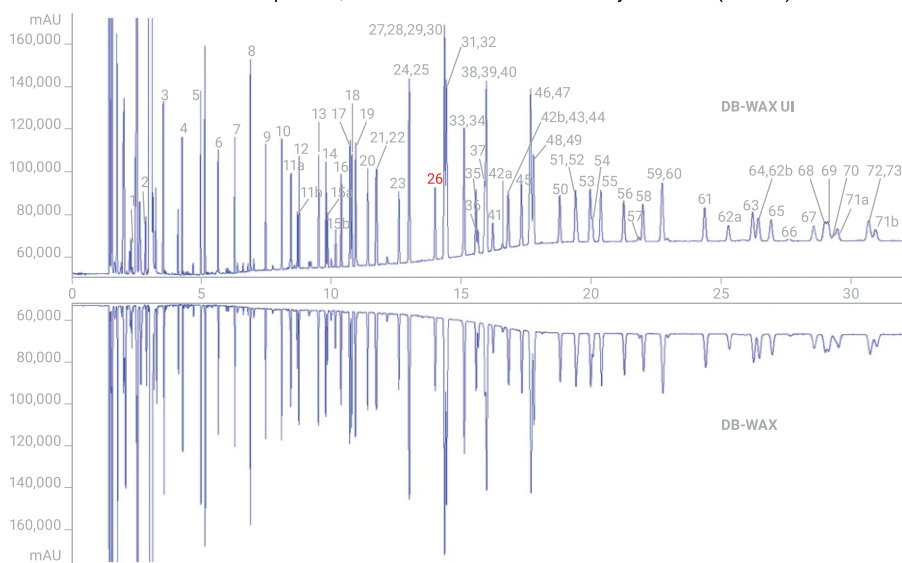
Identical selectivity enables easy standardization of DB-WAX UI for BTEX and other industrial solvents.

# Easily Upgrade DB-WAX Methods for Better Qualitative and Quantitative Results



DB-WAX methods containing active compounds (such as alcohols, carboxylic acids, and aldehydes) can easily be switched to Agilent J&W DB-WAX Ultra Inert GC columns without modifying your existing methods and retention time libraries. Identical selectivity specifications and operating temperatures simplify validation, and allow you to standardize methods for improved efficiency.

## Extended FAMES mix: 72 compounds, retention time locked for Methyl Stearate (nC18:0)



Test conditions:  
Column: DB-WAX UI 30 m x 0.25 mm id, 0.25  $\mu$ m (p/n 122-7032UI)  
Inlet: Split/splitless @ 250 °C (p/n G3970A), split ratio 50:1  
Injection volume: 1  $\mu$ L  
Carrier gas: Hydrogen  
Head pressure: Methyl Stearate is retention time locked at 14.000 min. Carrier gas pressure set to constant pressure mode, velocity approximately 36 cm/s at 50 °C and 53 kPa  
Oven program: 50 °C, 1 min, 25 °C/min to 200 °C, 3 min to 230 °C, 18 min hold  
Detector: FID @ 280 °C, H<sub>2</sub> 40 mL/min, Air: 450 mL/min, He make-up gas: 30 mL/min  
Flow path supplies: Ultra inert low pressure drop liner (p/n 5190-2295)  
Ultra inert gold seal (p/n 5190-6144)  
Self tightening column nut (p/n 5190-6194)  
Graphite-vespel ferrules (p/n 5181-3323) 10 pk  
• Long-life septa (p/n 5183-4761)

DB-WAX Ultra Inert has the same selectivity as DB-WAX as demonstrated with this separation of 72 FAME compounds.

Agilent leads the food analysis industry with products and services to help you deliver what your customers demand. We provide entire analytical workflow solutions, from sample preparation, to instruments, supplies, and powerful software. These products are used throughout the food production chain, including incoming inspection, new product development, quality control and assurance, and packaging.

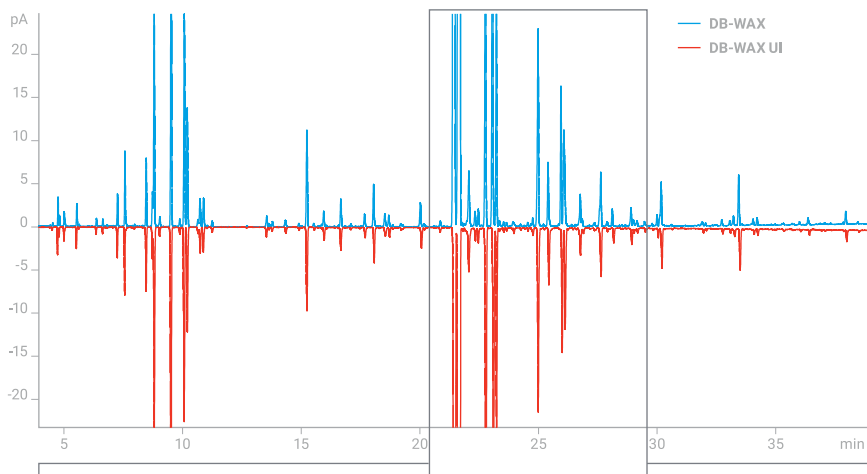
For more information, visit [www.agilent.com/chem/food](http://www.agilent.com/chem/food)

## What analysts are saying

"With DB-WAX UI, we are seeing better reproducibility of total aldehyde content and less tailing because of the improved inertness. [There is] no selectivity change compared to the standard DB-WAX, which is essential for complex citrus oil analysis. In addition, time spent for pretesting new columns is eliminated.

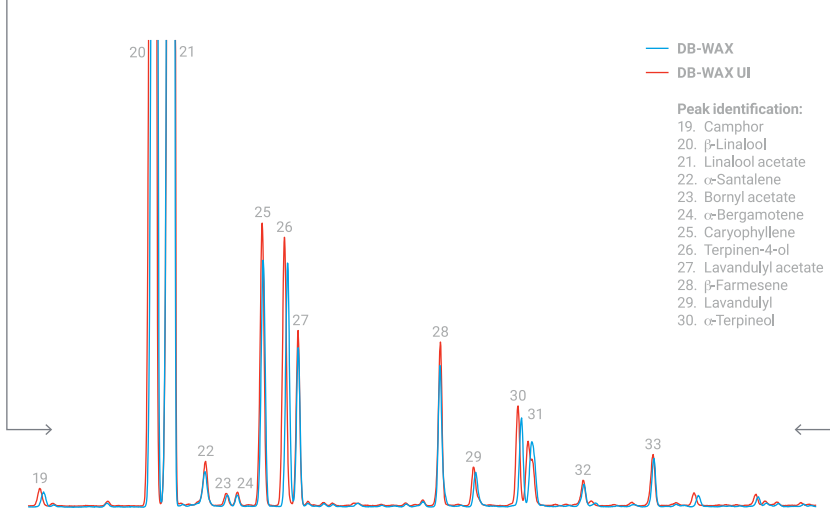
Dr. Andreas Böker, MCI Miritz Citrus

Lavender oil sample: Identical retention performance of DB-WAX and DB-WAX UI is demonstrated with this separation of lavender oil.



**Test conditions:**  
Column: DB-WAX UI, 30 m x 0.25 mm, 0.25 µm (p/n 122-7032UI), and DB-WAX, 30 m x 0.25 mm, 0.25 µm (p/n 122-7032)  
Instrument: Agilent 7683B autosampler and sample tray, 5 µL syringe (p/n G4513-80213), 1 µL  
Injection volume: 1 µL  
Carrier gas: Helium, constant flow mode  
RTL: D-Limonene locked to 8.450 min  
Inlet: Split/splitless @ 250 °C, split ratio 200:1  
Oven program: 52 °C (2 min), 5 °C/min to 80 °C (4 min), 4 °C/min to 250 °C, 1 min hold  
MSD: Agilent 5977A MSD, solvent delay 3.4 min, 230 °C (source), 150 °C (quad)  
Transfer line: 250 °C, EI mode Scan 40 to 400 amu  
Flow path supplies: Ultra inert low pressure drop liner (p/n 5190-2295)  
Ultra inert gold seal (p/n 5190-6144)  
Self tightening column nut (p/n 5190-6194)  
Graphite-vespel ferrules (p/n 5181-3323) 10 pk  
• Long-life septa (p/n 5183-4761)

Expanded view: Improved response for terpene, terpene-ol and sesquiterpene compounds



**Application Note:**  
Analysis of Lavender Essential Oil by Agilent J&W DB-WAX Ultra Inert Capillary GC Columns (5991-6635EN)

Compared with DB-WAX columns, DB-WAX UI columns have the same selectivity, which means no additional method development or validation is needed when replacing DB-WAX with DB-WAX UI.

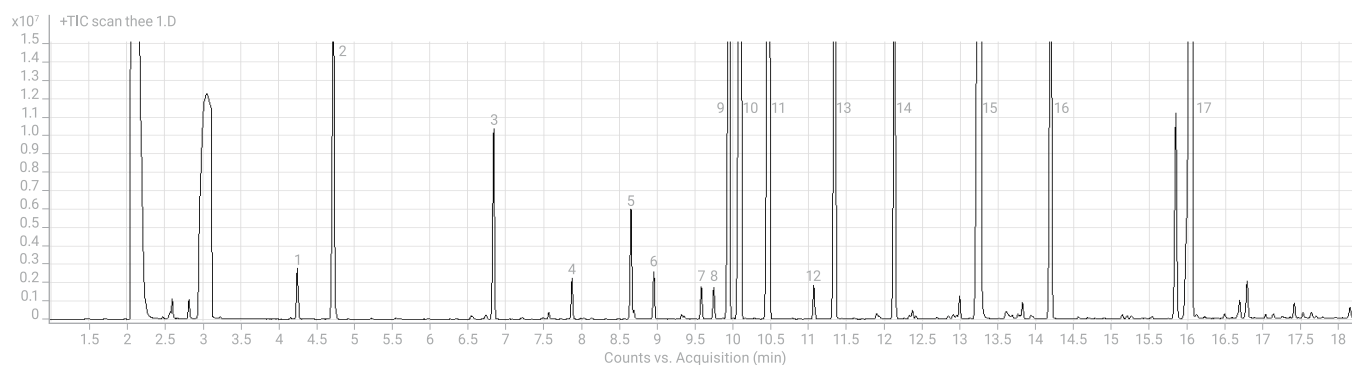
# Success Story: Aroma Analysis



WAX columns are commonly used for aroma and flavor profiling of foods and beverages. Aroma analysis often involves complex mixtures of compounds in a wide range of concentrations.

In the examples below, the DB-WAX UI columns provided optimum response for real-world samples\*.

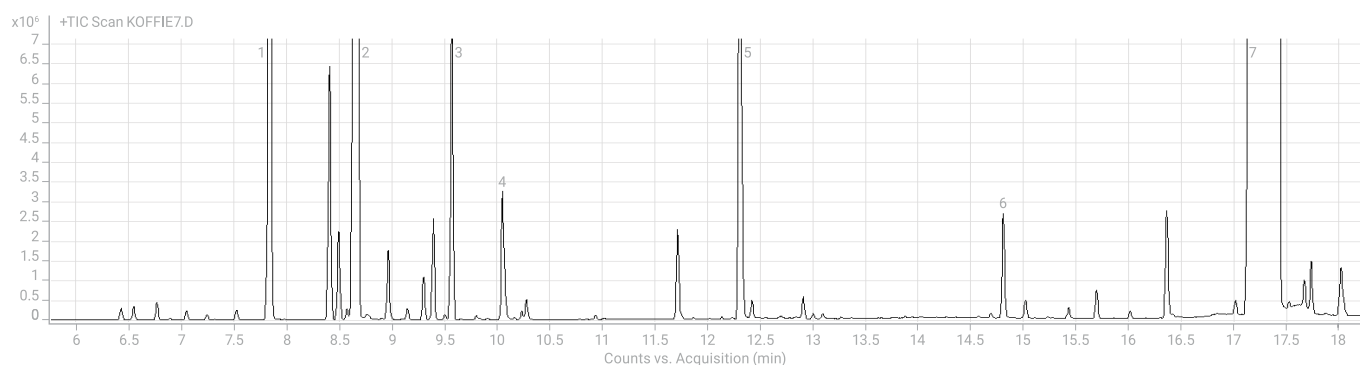
## Tea Aroma on DB-WAX UI



### Peak identification:

- |                                     |   |  |
|-------------------------------------|---|--|
| 1. Butane, 1,1-diethoxy-            | 7. .alpha.-Methyl-.alpha.<br>-[4-methylpentyl]oxiranmethanol                    | 11. trans-Linalool oxide (furanoid)                      |
| 2. Butane, 1,1-diethoxy-3-methyl-   | 8. .alpha.-Methyl-.alpha.<br>-[4-methylpentyl]oxiranmethanol                    | 12. Nonane, 1,1-diethoxy-                                |
| 3. 2-Hexenal                        | 9. 3-Buten-1-ol, TMS derivative   | 13. Linalool   |
| 4. 2-Hexenal diethyl acetal, trans  | 10. 2-Furanmethanol, 5-ethenyltetrahydro-.alpha.,<br>.alpha.,5-trimethyl-, cis- | 14. 3-Cyclohexen-1-ol, 4-methyl-1-(1-methylethyl)-, (R)- |
| 5. 3-Heptanol, 3-methyl-            |   | 15. 2,6,6-Trimethyl-2-cyclohexene-1,4-dione              |
| 6. 2-Pentanone, 4-hydroxy-4-methyl- |   | 16. Methyl salicylate                                    |
|                                     |   | 17. 2-Cyclopenten-1-one, 3-methyl-2-(2-pentenyl)-, (Z)-  |

## Coffee Aroma on DB-WAX UI



### Peak identification:

1. Dimethylketol
2. Ethyl 2-hydroxy-propanoate
3. Trimethyl-pyrazine
4. Acetic acid
5. Butyric acid
6. Caproic acid
7. Triacetin

### Test conditions:

- |                   |  |
|-------------------|--|
| Column:           | DB-WAX UI, 30 m x 0.25 mm id, 0.25 µm (p/n 122-7032UI) |
| Injection volume: | 1 µL split 1/10 @250 °C                                |
| Liner:            | Ultra inert inlet liner (p/n 5190-2293)                |
| Oven program:     | 50 °C (2 min) to 10 °C/min to 250 °C (3 min)           |
| Carrier:          | 1 mL/min He constant                                   |
| MS:               | Scan (35 to 550 amu)                                   |

\* Chromatograms courtesy of Dr. Frank David, Research Institute for Chromatography, Belgium.

# Ordering Information

## Which Ultra Inert GC column is best for your application?

↑	<b>High Polar</b>	DB-WAX UI
	<b>Mid Polar</b>	DB-35ms UI
		DB-624 UI
	<b>Non/Low Polar</b>	DB-5ms UI
		HP-5ms UI
		DB-1ms UI
HP-1ms UI		

### Application-specific Ultra Inert columns:

DB-UI 8270D: Environmental semivolatiles

DB-Select 624 UI for 467: Pharmaceutical residual solvents

DB-FATWAX UI: Fatty acids and FAME

DB-BAC1 and DB-BAC2 Ultra Inert: For blood alcohol compounds\*\*

### Need more help?

Use the Agilent J&W GC Column Selection Tool to find the right column in just a few clicks:

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

Learn how to optimize your flow path for inertness, so you can achieve the parts-per-billion or parts-per-trillion detection levels that today's analyses demand.

See our complete line of Ultra Inert GC columns:

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



Download our Inert Flow Path brochure:  
[www.agilent.com/chem/ifpbrochure](http://www.agilent.com/chem/ifpbrochure)



Download our GC consumables catalog:  
[www.agilent.com/en-us/promotions/catalog](http://www.agilent.com/en-us/promotions/catalog)

### Ultra Inert DB-WAX GC columns

ID (mm)	Length (m)	Film (µm)	Part No.
<b>DB-WAX Ultra Inert</b>			
0.18	20	0.18	121-7022UI
		0.30	121-7023UI
0.20	25	0.20	128-7022UI
		0.25	122-7012UI
0.25	30	0.25	122-7032UI
		0.50	122-7032UI-INT*
0.25	60	0.50	122-7033UI
		0.50	122-7033UI-INT*
0.32	15	0.25	122-7062UI
		0.25	122-7062UI-INT*
0.32	30	0.50	122-7063UI
		0.50	122-7063UI
0.32	60	0.25	123-7012UI
		0.25	123-7032UI
0.32	60	0.50	123-7032UI-INT*
		0.50	123-7033UI
0.32	60	0.50	123-7033UI-INT*
		0.25	123-7062UI
0.32	60	0.50	123-7063UI
		0.50	123-7063UI-INT*
0.53	15	1.00	125-7012UI
		0.25	125-7031UI
0.53	30	0.50	125-7037UI
		1.00	125-7032UI
0.53	60	1.00	125-7032UI
		1.00	125-7062UI

\* For use only with the Intuvo GC.

\*\* For Forensic Use.

## Inert flow path

# An Integrated Approach to Inertness: The Agilent Advantage

### Flow path inertness is vital to your analysis and is also on the cutting edge of GC

By minimizing activity along every step of the GC and GC/MS flow path, Agilent Inert Flow Path solutions improve system performance, ensure better results, and allow you to process more samples without unplanned maintenance and recalibration. So, you won't miss a thing in your GC analysis.

Learn more: [www.agilent.com/chem/inert](http://www.agilent.com/chem/inert)



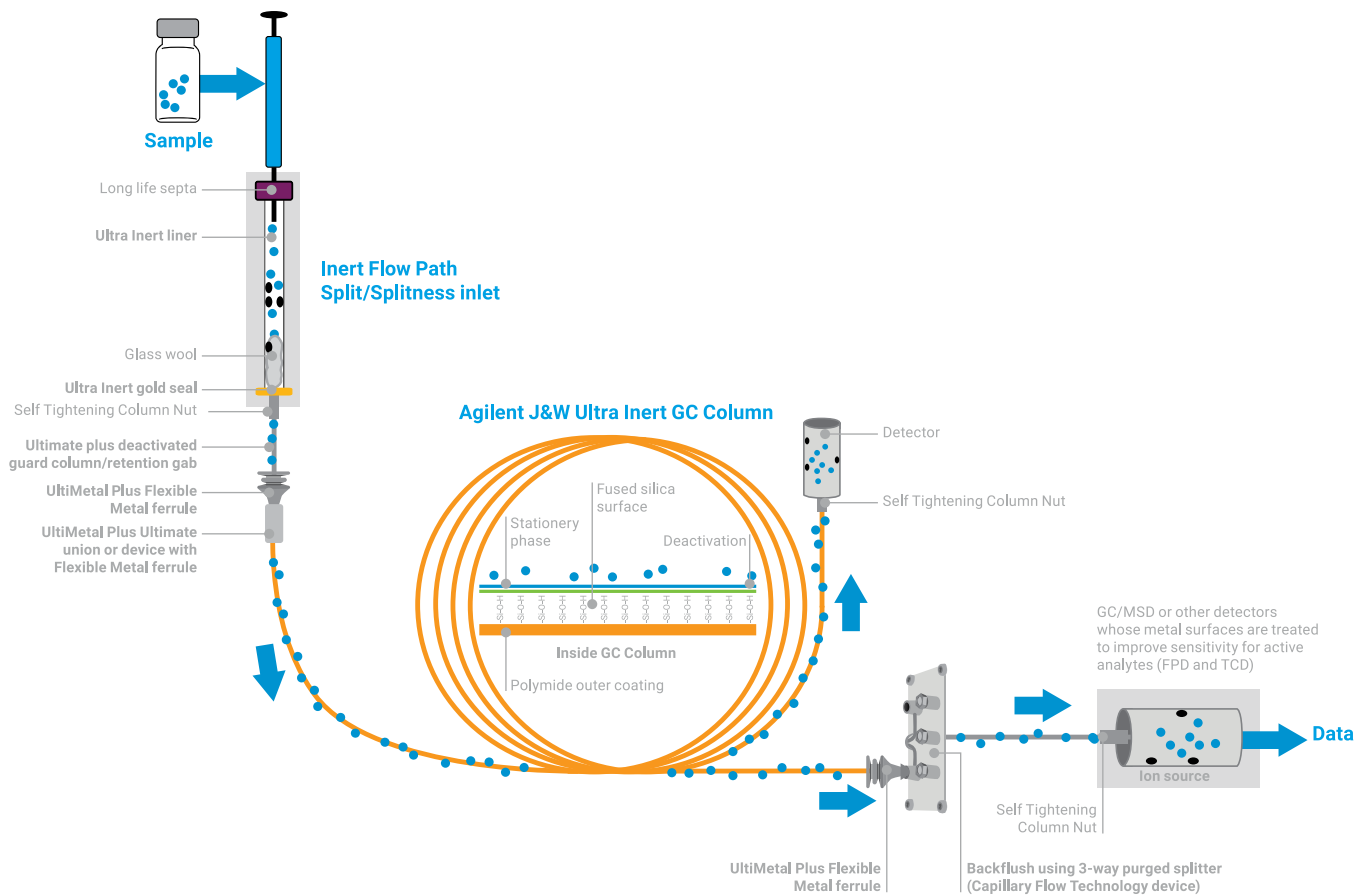
Agilent Ultra Inert liners and gold seals



Agilent UltiMetal Plus flexible metal ferrules



Agilent Self Tightening column nut



# Ensure a Lifetime of Instrument Performance with Agilent Supplies and Services

## Accurate, reliable results with fewer repeated samples

Agilent sample preparation products help you move easily from sample to successful analytical results:

- Extend instrument performance with Captiva filtration
- Reduce costs and save time with Bond Elut QuEChERS kits
- Achieve lower detection limits with Bond Elut silica and polymeric SPE products
- Selectively remove lipids in complex matrices with Enhanced Matrix Removal (EMR)

Learn more: [www.agilent.com/chem/sampleprep](http://www.agilent.com/chem/sampleprep)



## Maintain maximum instrument protection

The Agilent Gas Clean Filter System delivers clean gases, reducing the risks of column damage, sensitivity loss, and instrument downtime:

- Deliver clean gases for accurate analyses
- Fast, leak-free filter replacement reduces downtime
- Economical, with immediate payback
- Highly sensitive filter indicators provide maximum instrument protection

Learn more: [www.agilent.com/chem/gasclean](http://www.agilent.com/chem/gasclean)



## Solve problems quickly, increase uptime, and optimize resources

Whether you need support for a single instrument or a multilab, multivendor operation, Agilent helps maximize the value of your investment with:

- Repair and maintenance services
- Remote advisor support
- Service plans to suit your needs
- Compliance support
- Enterprise services

Learn more: [www.agilent.com/chem/services](http://www.agilent.com/chem/services)

## Agilent CrossLab: Real insight, real outcomes

CrossLab goes beyond instrumentation to bring you services, consumables, and lab-wide resource management. So your lab can improve efficiency, optimize operations, increase instrument uptime, develop user skill, and more.

Learn more about Agilent J&W DB-WAX Ultra Inert GC columns

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

Learn more about all the components that make your GC flow path inert

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

Download other application examples

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