

# Now There's A WAX Column That Can Take The Heat

Introducing:  
Agilent J&W DB-HeavyWAX GC columns



## Extend operating temperature limits while maintaining WAX selectivity

WAX GC columns can be used for a wide variety of applications—including industrial chemicals, pharmaceutical raw materials, alcoholic beverages, flavors, and fragrances. However, they typically have lower maximum operating temperatures than nonpolar columns. Heating a standard WAX column above its maximum operating temperature damages the stationary phase, causing elevated column bleed, retention time shift, and reduced column lifetime.

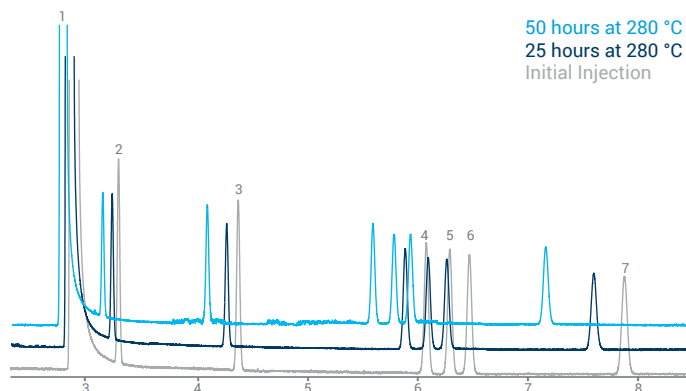
## Agilent J&W DB-HeavyWAX GC columns feature an extended temperature limit of up to 280 °C isothermal and 290 °C programmed

These first-of-a-kind Polyethylene Glycol (PEG) columns deliver several advantages when analyzing difficult compounds:

- Fast analysis: Higher maximum temperatures allow for shorter run times, plus a lower cost per test
- Retention time stability and increased column lifetime—even at maximum operating temperatures
- Decreased carryover and ghost peaks: Bake-out the column at the end of your analysis to reduce sample matrix effect
- An extended list of analytes, including higher molecular weight compounds
- A broader application range for multidimensional GC applications: Oven temperatures can be higher than with standard WAX columns

## Proof of thermal stability: Standard WAX column vs. Agilent J&W DB-HeavyWAX column

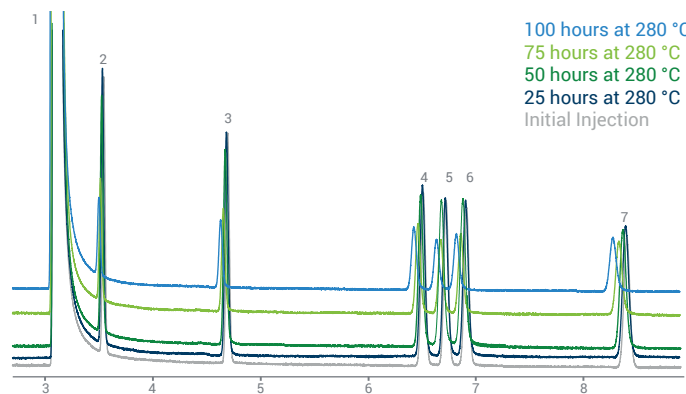
Standard WAX column



50 hours at 280 °C  
25 hours at 280 °C  
Initial Injection

Peak identification: 1. Methanol 2. Benzene 3. Toluene 4. Ethylbenzene  
5. P-xylene 6. M-xylene 7. O-xylene

Agilent J&W DB-HeavyWAX column



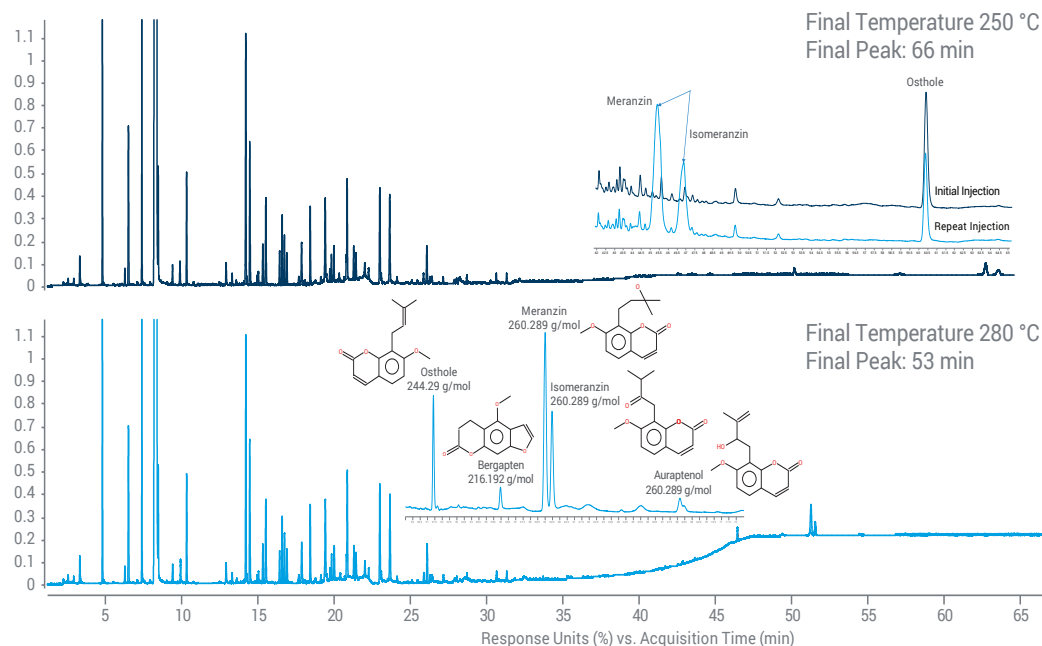
100 hours at 280 °C  
75 hours at 280 °C  
50 hours at 280 °C  
25 hours at 280 °C  
Initial Injection

Even after 100 hours at 280 °C, the retention times showed minimal shift with the Agilent column for this 100 ppm BTEX standard.

## Extend your applications to analytes with high boiling points

Higher maximum operating temperatures allow heavy compounds to elute from the column—eliminating carryover and ghost peaks, and improving data reliability. In addition, higher temperatures decrease run times by almost 20%.

### Analysis of cold pressed pink grapefruit essential oil using DB-HeavyWAX

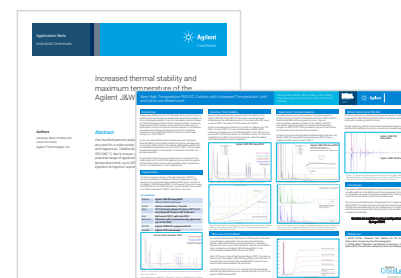


When analyzing to 250 °C, there's a risk of carryover for late-eluting compounds. These compounds become trapped when the column cools at the end of the run, and appear as ghost peaks in the next run.

Extending the final temperature to 280 °C allows more compounds to be analyzed without the risk of carryover to the next run.

### Ordering information

ID (mm)	Length (m)	Film (µm)	Temp limits (°C)	7 in Cage part number	Intuvo config. part number
0.10	10	0.10	40 to 280/290	127-7112	
0.18	10	0.18	40 to 280/290	121-7112	
	20	0.18	40 to 280/290	121-7122	
	15	0.25	40 to 280/290	122-7112	
0.25	25	0.20	40 to 280/290	122-7127	
	30	0.25	40 to 280/290	122-7132	122-7132-INT
		0.50	40 to 270/280	122-7133	122-7133-INT
	50	0.20	40 to 280/290	122-7157	
	60	0.25	40 to 280/290	122-7162	122-7162-INT
0.32	15	0.50	40 to 270/280	122-7163	
		0.25	40 to 280/290	123-7112	
	30	0.25	40 to 280/290	123-7132	123-7132-INT
		0.50	40 to 270/280	123-7133	123-7133-INT
	50	0.20	40 to 280/290	123-7157	
	60	0.25	40 to 280/290	123-7162	
		0.50	40 to 270/280	123-7163	123-7163-INT



### NEW High-temperature Analysis Information Kit

See how your analysis can benefit from improved thermal stability. Kit includes technical poster and application notes.

Request yours

[www.agilent.com/chem/db-heavywaxinfo](http://www.agilent.com/chem/db-heavywaxinfo)

Try out a column to experience the difference that improved thermal stability can make. Visit [www.agilent.com/chem/db-heavywax](http://www.agilent.com/chem/db-heavywax)

This information is subject to change without notice.

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