

Restek GC Accessories

Same Separation, Speedier Solution

Get the same GC separation in less time—use a GC Accelerator kit and the *EZGC* method translator to accurately convert methods to a scaled-down column format.



RESTEK

Pure Chromatography

www.restek.com

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- Get the same GC separation in less time—use a GC Accelerator kit and the EZGC method translator to accurately convert methods to a scaled-down column format.
- Scaled-down methods let you speed up analysis time and increase sample throughput without capital investment.
- GC Accelerator installs easily without damaging the GC column or interfering with the MS interface.

Designed with GC-MS users in mind, the GC Accelerator kit provides a simple way to speed up sample analysis. By reducing oven volume, these inserts allow faster ramp rates to be attained, which reduces oven cycle time and allows for increased sample throughput and more capacity to process rush samples. When faster ramp rates are used, existing methods can be accurately scaled down to smaller, high-efficiency, narrow-bore columns using Restek's EZGC method translator. With a scaled-down column, a properly translated method, and a GC Accelerator kit, you can obtain the same chromatographic separation—often with greater sensitivity—in a fraction of the time without making a capital investment.

It's Easy, Here's How:

Step 1:

Open the EZGC method translator (www.restek.com/ezgc-mtfc) and input your current method. Simply enter the carrier gas, column dimensions, flow rate, outlet pressure, and oven program that you currently use.

EZGC Method Translator									
Carrier Gas		Original		Translation					
		Helium		Helium					
Column									
Length		30.00		20.00	m				
Inner Diameter		0.25		0.15	mm				
Film Thickness		0.25		0.15	µm				
Phase Ratio		250		250					
Control Parameters									
Outlet Flow	→	1.20	→	0.72	mL/min				
Average Velocity		40.13		38.07	cm/sec				
Holdup Time		1.25		0.88	min				
Inlet Pressure (gauge)		11.43		31.20	psi				
Outlet Pressure (abs)		0.00		0.00	psi				
		Atm Vacuum		Atm Vacuum					
Oven Program									
<input type="radio"/> Isothermal <input checked="" type="radio"/> Ramps Number of Ramps: 3 (1-4)		Ramp (°C/min)	Temp (°C)	Hold (min)		Ramp (°C/min)	Temp (°C)	Hold (min)	
		28	285	0		39.8	285	0	
		3	305	0		4.3	305	0	
		20	320	5		28.5	320	3.5	
Control Method									
		Constant Flow							
Results Solve for <input type="radio"/> Efficiency <input type="radio"/> Speed <input checked="" type="radio"/> Translate <input type="radio"/> Custom									
Run Time		21.10		14.78 min					
Speed				1.43 x					

Step 2:

Specify the dimensions of the scaled-down column that you want to use. Be sure the calculated phase ratios for both columns are similar.

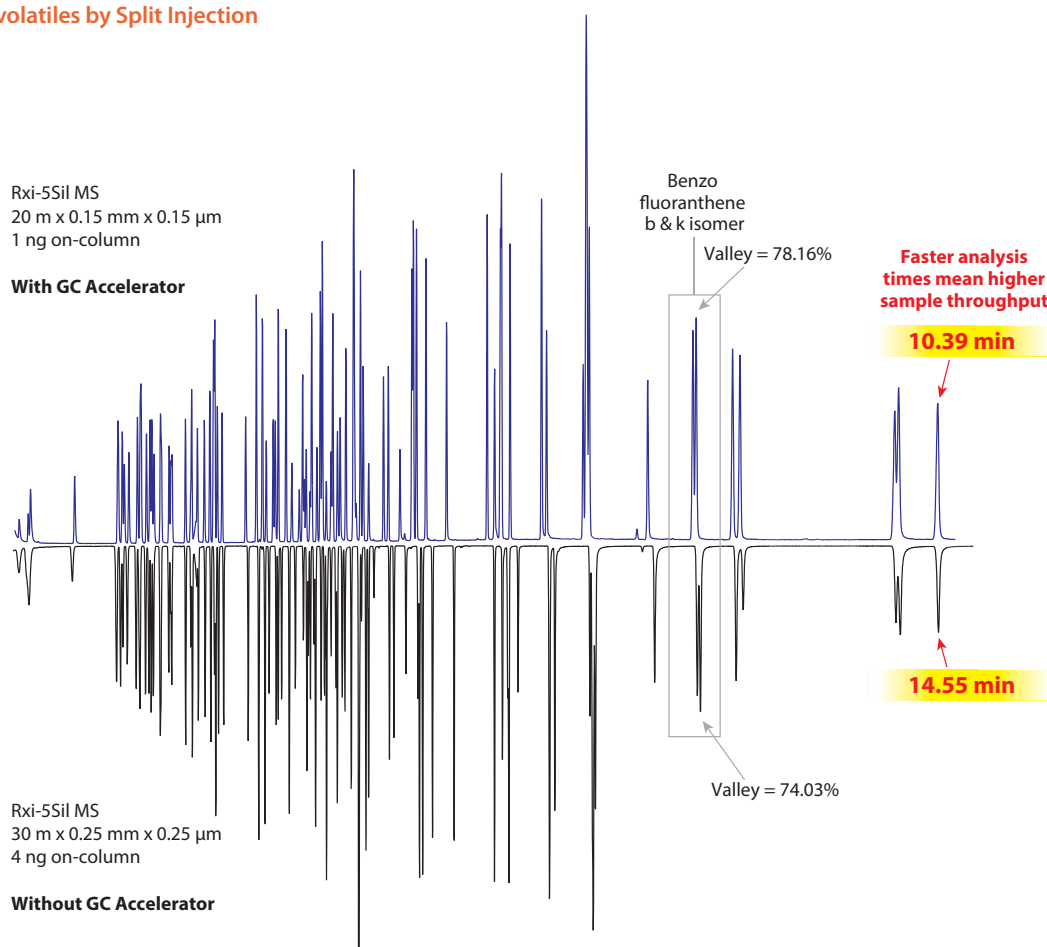
Step 3:

Select the control method and choose "Translate" to get a full set of new conditions that will provide similar chromatography in less time. Using a GC Accelerator kit allows your oven to meet the more aggressive ramp rates of the new method.

Learn more at www.restek.com/GCAccelerator

Get the same separation in a fraction of the time by scaling your method down to a smaller, more efficient column format with the EZGC method translator.

Example: Semivolatiles by Split Injection



Visit www.restek.com/GCAccelerator for technical details on how we optimized this analysis.

Scaling Down is Possible Because You Can Meet More Aggressive Ramp Rates with GC Accelerator Oven Insert Kits

Temperature Range (°C)	120 V Oven Ramp Rate (°C/min)		>200 V Oven Ramp Rate (°C/min)	
	Without GC Accelerator	With GC Accelerator	Without GC Accelerator	With GC Accelerator
50–70	75	120	120	120
70–115	45	95	95	120
115–175	40	65	65	110
175–300	30	40	45	70
300–350*	20	30	35	65

* Agilent ovens are programmable to 450 °C, but this product was only tested to a maximum operating temperature of 350 °C. Prior to analysis, confirm the analytical column can withstand the temperatures and ramp rates you plan to use.

