

4660/4100 Quick Start Guide (Helium Purge)

Application: Analysis of Volatile Organic Compounds in Soils and Waters by GC/MS Using USEPA Method 8260

Suggested Operating Conditions

Purge-and-Trap	Eclipse 4660 P&T Sample Concentrator
Trap	#10 trap; Tenax® / Silica gel / CMS
Purge Gas	Zero grade Helium at 40 mL/min
Purge Time	11 min
Sparge Mount Temperature	45 °C
Sample Temperature	45 °C
Desorb Time	0.5 min
Bake Time	4 min
OI #10 Trap Temperature	Ambient during purge 180 °C during desorb pre-heat 190 °C during desorb 210 °C during bake
Water Management	120 °C during purge Ambient during desorb 240 °C during bake
Transfer Line Temperature	120 °C - 150 °C
Six-port Valve Temperature	120 °C - 150 °C

Autosampler	4100 Water/Soil Sample Processor
System Gas	Zero grade nitrogen
Purge Gas	Zero grade helium
LV20 Pressure	8.0 psi
Loop-based Time Settings	Default
Rinse Water	80 °C
Soil Sample Transfer	150 °C
Soil Oven	150 °C
Soil Lift Station	45 °C



4100 Sample Processor Methods			
Sample Type	Waters Only	Soils Only	Blanks Only
Vial Cap Color	Blue	Yellow	Green
Needle Rinses	1	1	0
SAM A (µL)	5	5	5
SAM B (µL)	0	0	0
SAM C (µL)	0	0	0
SAM D (µL)	0	0	0
Purge Time (min)	11.0	11.0	11.0
Desorb Time (min)	0.5	0.5	0.5
P&T Rinses	2	1	0
Rinse Water	Hot	Hot	Hot
Water Stir Time (min)	0.0		
Water Settle Time (sec)	0		
Soil Add Water to Vial (#loops)		* 1 x 5 mL	
Soil Pre-Heat Stir		Yes	
Soil Pre-Heat/Purge Temp (°C)		45.0	
Soil Stir During Purge		Yes	

* Suggested initial volume in vial should be 5 mL and final volume 10 mL.

Gas Chromatograph	Agilent 7890A
Column	Restek RTX-VMS 20 meter, 0.18 mm ID, 1 µm film
Carrier Gas	Zero grade helium
Inlet Temperature	250 °C
Inlet Liner	1.5 mm Direct
Column Flow Rate	0.6 mL/min
Split Ratio	50:1 to 150:1
Oven Program	Hold at 40 °C for 1.5 min 16 °C/minute to 180 °C 40 °C/minute to 220 °C Hold at 220 °C for 1.5 min Total GC Run is 12.75 min
Mass Spectrometer	Agilent 5975C
Mode	Scan 35 - 300 amu
Scans/Second	5.19
Solvent Delay	1.40 min
Transfer Line Temperature	250 °C
Source Temperature	300 °C

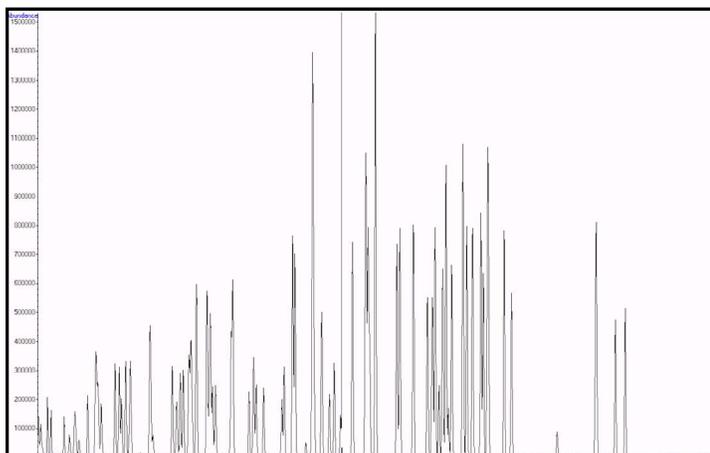


Figure 1. Soil

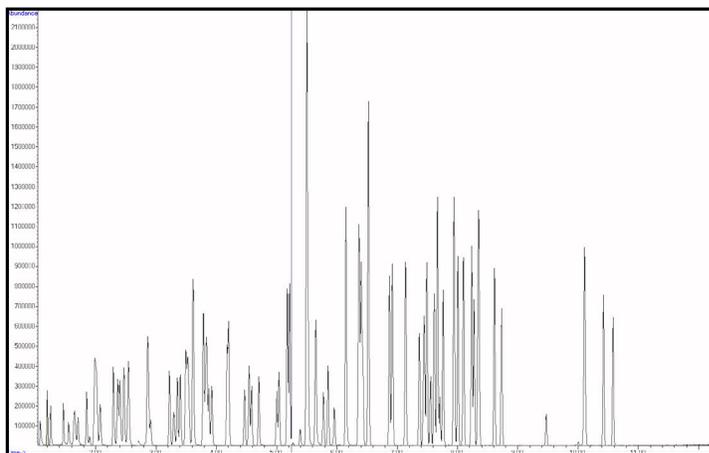


Figure 2. Water



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