

# ANALYSIS OF VOLATILE ORGANIC COMPOUND IN SOILS & WATER BY GC/MS USING METHOD 8260

## 4760/4100 QUICK START GUIDE (HELIUM PURGE)

The suggested operating conditions for the 4760 Purge-and-Trap Analyzer and the 4100 Water/Soil Sample Processor for the Analysis of Volatile Organic Compounds in Soils & Waters by GC/MS using the USEPA Method 8260.

Purge-and-Trap	Eclipse 4760 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 Process Methods			
Sample Type	Waters Only	Soils Only	Blanks Only
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)	5		
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 or Agilent DB-624 UI, 30 meter, 0.25 mm ID, 1.4 µm film
Carrier Gas	Zero grade helium
Inlet Temperature	240 °C
Inlet Liner	1 mm Agilent Ultra Inert Straight Taper
Column Flow Rate	0.8 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 4.0 min Total GC Run is 15.25 min

Mass Spectrometer	Agilent 5975C
Mode	Scan 35 - 300 amu
Scans/Second	5.19
Solvent Delay	1.40 min
Transfer Line Temperature	240 °C
Source Temperature	230 °C
Quadrupole Temperature	150 °C
Draw Out Plate	6 mm

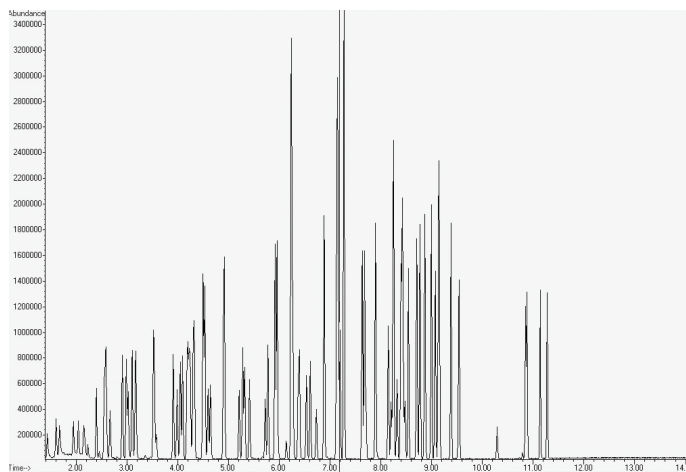


Figure 1. Soil

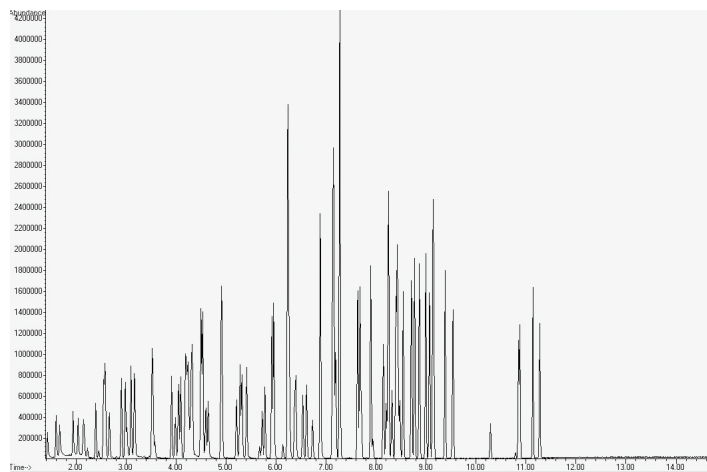


Figure 2. Water

**xylem**  
Lab Solutions

OI, a Xylem brand  
1725 Brannum Lane  
Yellow Springs, OH 45387

+1.937.767.7241  
xylem-lab@xylem-inc.com  
oico.com

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