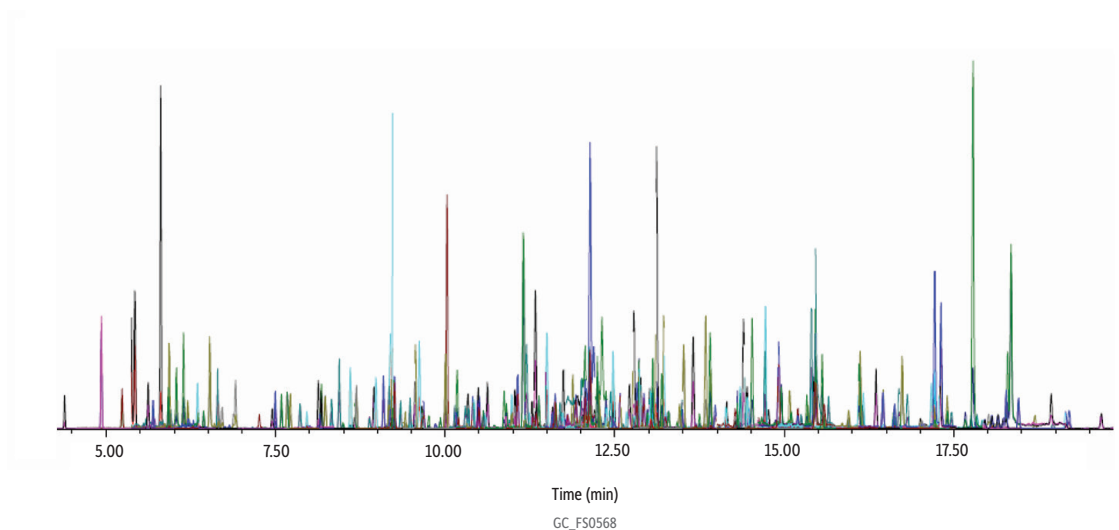


Residual Pesticides in Botanicals by GC-MS/MS

- Analyze 165 pesticides in a complex matrix.



Column	Rxi-5ms, 30 m, 0.25 mm ID, 0.25 μ m (cat.# 13423) using Rxi guard column 5 m, 0.25 mm ID (cat.# 10029) with SiLTite μ -Union connector kit (cat.# 23885)
Sample	GC Multiresidue pesticide kit (cat.# 32562)
Diluent:	Toluene
Conc.:	10 ng/mL
Injection	
Inj. Vol.:	2 μ L pulsed splitless
Liner:	Topaz 3.5 mm ID single taper inlet liner w/wool (cat.# 23336)
Inj. Temp.:	250 $^{\circ}$ C
Pulse Pressure:	36 psi (248.2kPa)
Pulse Time:	1.5 min
Oven	
Oven Temp.:	90 $^{\circ}$ C (hold 1 min) to 130 $^{\circ}$ C at 30 $^{\circ}$ C/min to 330 $^{\circ}$ C at 10 $^{\circ}$ C/min (hold 2 min)
Carrier Gas	He, constant linear velocity
Linear Velocity:	55 cm/sec
Detector	Shimadzu GCMS TQ8040
Transfer Line Temp.:	290 $^{\circ}$ C
Analyzer Type:	Quadrupole
Source Temp.:	230 $^{\circ}$ C
Electron Energy:	70 eV
Ionization Mode:	El
Instrument	Shimadzu GCMS-TQ8040
Notes	Matrix-matched calibration standards were prepared in ginseng. Calibration curves were generated by the internal standard method using PCB52 as the internal standard. An MRM analytical method was created using the Shimadzu pesticides database.

Although the multiresidue pesticides kit mixes are formulated to ensure maximum long-term stability and reliability as packaged, stability may become an issue when a large number of compounds with different chemical functionalities are combined together into a single mix. This should be taken into consideration for quantitative analysis.

Acknowledgement Chromatogram provided by Shimadzu. Publication 3655-11615-10ANS (C146-E334), First Edition, December 2016. Residual Pesticides Analysis of Botanical Ingredients Using Gas Chromatography Triple Quadrupole Mass Spectrometry. Riki Kitano, Tairo Ogura, Nicole Lock, Robert Clifford, Julie Kowalski, Jack Cochran, Dan Li