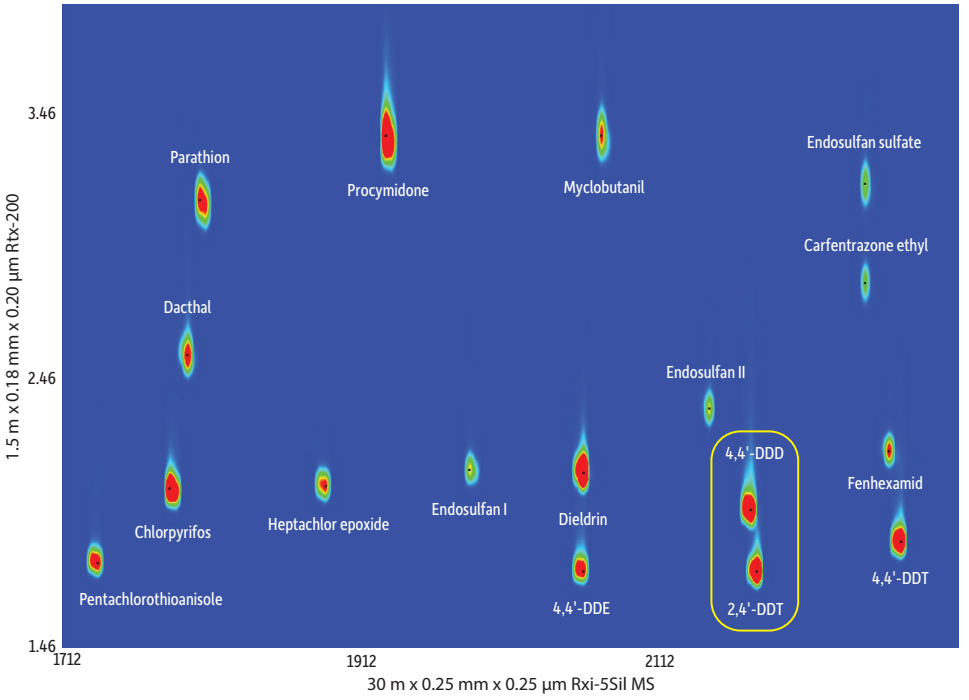
Pesticides in Dietary Supplements (Zoom of GCxGC-TOFMS Contour Plot)

Excellent two-dimensional separation of pesticides using orthogonal column set of Rxi-5Sil MS and Rtx-200. Note 2D separation of compounds that have isobaric interferences when coeluting on Rxi-5Sil MS, 2,4′-DDT and 4,4′-DDD.



GC_FF1188

Column	Rxi-5Sil MS 30 m, 0.25 mm ID, 0.25 µm (cat.# 13623) Rtx-200 1.5 m, 0.18 mm ID, 0.20 µm (cat.# 45001)
Standard/Sample	Mixed pesticide standard
Diluent:	Toluene
Conc.:	2 ng/µL
Injection	
Inj. Vol.:	1 µL splitless (hold 1 min)
Liner:	Gooseneck Splitless (4mm) w/Wool (cat.# 22405)
Inj. Temp.:	250 °C
Purge Flow:	40 mL/min
Oven	
Oven Temp.:	Rxi-5Sil MS: 80 °C (hold 1 min) to 310 °C at 4 °C/min (hold 1.5 min) Rtx-200: 90 °C (hold 1 min) to 320 °C at 4 °C/min (hold 1.5 min)
Carrier Gas	He, constant flow
Flow Rate:	1.8 mL/min
Modulation	
Modulator Temp. Offset:	25 °C
Second Dimension Separation Time:	4 sec
Hot Pulse Time:	1.2 sec
Cool Time between Stages:	0.8 sec
Detector	TOFMS
Transfer Line Temp.:	290 °C
Analyzer Type:	TOF
Source Temp.:	225 °C
Electron Energy:	70 eV
Mass Defect:	-20 mu/100 u
Solvent Delay Time:	4 min
Ionization Mode:	EI
Acquisition Range:	45 to 550 amu
Spectral Acquisition Rate:	100 spectra/sec
Instrument	LECO Pegasus 4D GCxGC-TOFMS
Notes	See application note GNAN1338 for extraction and cleanup details. A 1.5 m length of the Rtx-200 column was trimmed from a 10 m column. Columns were connected with a Universal Press-Tight Connector (cat.# 20429). See chromatogram GC_FF1187 for full scale view.