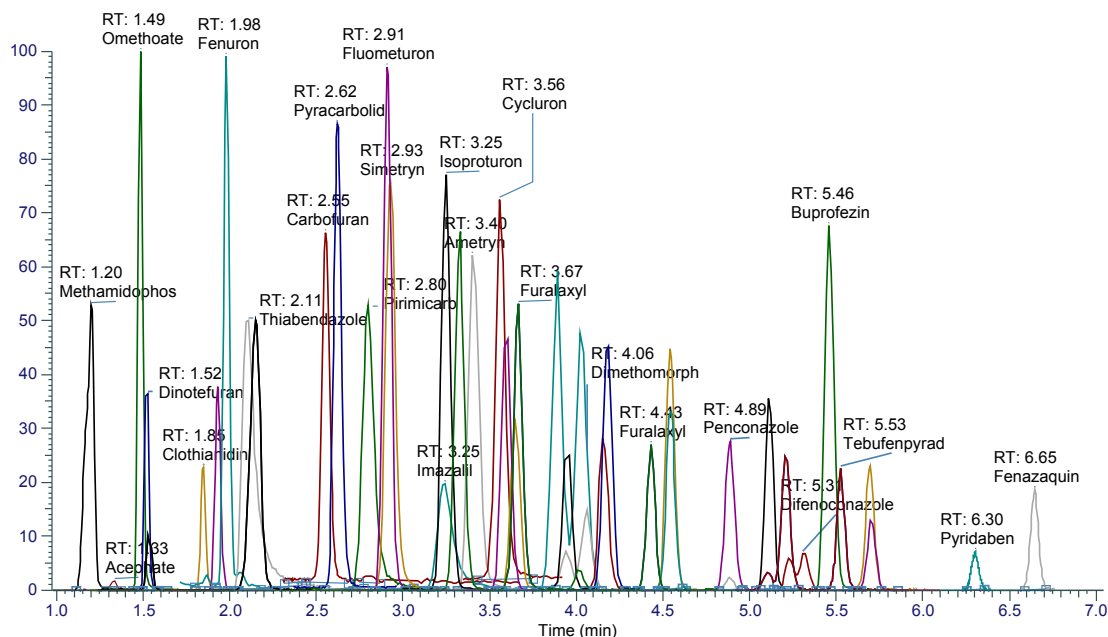


Application Note

Data Courtesy of : Ken Matuszak
ThermoFischer Scientific

Microflow LC-MS of 43 Pesticides in Garlic extracts

RT : 0.97-7.04



Experimental Conditions

Column: 5µm Evosphere AQUA 100x0.5mm
p/n EVOAQ-550505

Mobile phase

A: Water with 0.1% formic acid and 5mm Ammonium acetate

B: 90:10 MeOH:Water with 0.1% formic acid and 5mm Ammonium acetate

Gradient:

Time	%B
0	0
0.5	0
1.5	50
6.5	100
8.5	100

Flow Rate: 50µl/min

Orbitrap Exploris 120 mass spectrometer in tSIM mode

Resolution 60,000 FWHM

ESI spray voltage : 3500V

Ion transfer tube 350°C

RF lens 60%

Compounds

Compounds	Linear range (ppb)
Methamidophos	0.05-50
Accephate	1.00-50
Omethoate	0.01-50
Dinotefuran	0.05-50
Butoxycarboxim	0.1-50
Clothianidin	0.05-50
Imidacloprid	0.05-50
Fenuron	0.5-50
Thiabendazole	0.01-50
Acetamiprid	0.05-50
Carbofuran	0.5-50
Pyracarbolid	0.5-50
Pirimicarb	0.1-50
Fluometuron	0.01-50
Simetryn	0.01-50
Imazalil	0.05-50
Isoproturon	0.05-50
Methabenzthiazuron	0.05-50
Ametryn	0.05-50
Cycluron	0.5-50
Fenamidon	0.5-50

Compounds

Compounds	Linear range (ppb)
Azoxystrobin	0.05-50
Furalaxyl	0.05-50
Triadimefon	0.05-50
Dimethomorph	0.05-50
Terbutryn	0.05-50
Bifenazate	1.00-50
Spirotetramat	0.05-50
Mefanacet	0.05-50
Fenoxycarb	0.05-50
Flusilazole	0.05-50
Zoxamide	0.05-50
Penconazole	0.05-50
Bitertanol	0.50-50
Trifloxystrobin	0.05-50
Ipconazole	0.05-50
Difenoconazole	0.10-50
Buprofezin	0.01-50
Tebufenpyrad	0.05-50
Hexythiazox	0.50-50
Pyriproxyfen	0.05-25
Pyridaben	0.50-25
Fenazaquin	0.05-50

- Microflow with the Evosphere® monodisperse fully porous particle (MFPP) columns provides enhanced sensitivity over traditional particles allowing for larger dP to be used even when used in narrow bore columns (0.3-1.0mm i.d.).

- Evosphere AQUA provides the best combination of peak shape, retention of polar analytes and backpressure to resolve the pesticides and provide high sensitivity.

- Microflow LC-MS for pesticide residue analysis in food offers greatly reduced solvent consumption compared to standard flow systems that are currently the 'Gold standard' in food control laboratories.

- The developed microflow method was calculated to consume just 37ml of mobile phase A and 30ml of mobile phase B per 100 injections.

- Using a Thermo® Vanquish NEO® UHPLC system allows maximum performance for reproducible nano, capillary and microflow LC-MS applications