

## Comparison of manual and automated SPE for analysis of triazine pesticides in tap water

Method summary: SPE column (C18 500mg/6mL) is conditioned using 10 mL methanol and 10 mL water. Water sample (500 mL) is then loaded. The SPE column is purged using air and then eluted for fraction collection using 3 mL methanol and 7 mL ethyl acetate. The fraction is evaporated to near dry using a nitrogen blower and redissolved with 2 mL acetone+hexane (1:1) and analyzed by GC MS. Tap water samples spiked with 8 triazine pesticides at 1 ppb level are extracted using vacuum manifold and SPE-03 respectively.

### SPE-03 method setting

Action	Flow rate (mL/min)	Volume (mL)	Remarks
Elute 1	5	10.0	Wash column using 10 mL methanol
Elute 2	5	10.0	Wash column using 10 mL water
Add samp	5	500.0	Load 500 mL water sample
Blow air	20	40.0	Use air to purge the SPE column
Elute 1	5	0.1	Change elution solvent to methanol
Collect 1	5	3.0	Elute with 3 mL methanol and collect the fraction
Elute 3	5	0.1	Change the elution solvent to ethyl acetate
Collect 1	5	7.0	Elute with 7 mL ethyl acetate and collect the fraction

### Results:

Pesticide Name	Recovery (%)		RSD (% , n=3)	
	Manual SPE	Auto SPE	Manual SPE	Auto SPE
1. Triadimefon	76	99	8	2
2. Paclobutrazol	83	97	14	6
3. Hexaconazole	88	100	14	5
4. Uniconazole	83	93	13	5
5. Myclobutanil	77	95	10	5
6. Flusilazole	90	93	5	6
7. Propiconazole	83	101	15	7
8. Tebuconazole	82	93	6	4

