# Waters™

Application Note

Multi-Residue Analysis of Pesticides in Avocado Using AOAC QuEChERS Method by GC-MS

Waters Corporation



This is an Application Brief and does not contain a detailed Experimental section.

## Abstract

This application brief demonstrates analysis of pesticides in avocado using AOAC QuEChERS Method by GC-MS.

### Experimental

#### **Extraction Procedure**

- 1. Add 15 mL 1% acetic acid in acetonitrile into the 50 mL DisQuE extraction tube.
- 2. Add 15 g of homogenized sample into the 50 mL tube.
- 3. Add any internal standards and standard mixture.
- 4. Shake vigorously for 1 minute and centrifuge > 1500 rcf for 5 minutes.
- 5. Transfer 1 mL of the acetonitrile extract into the 2 mL clean-up tube containing 50 mg PSA, 150 mg MgSO  $_{4}$ , and 50 mg  $C_{18}$ .
- 6. Shake for 30 seconds and centrifuge >1500 rcf for 1 minute.
- 7. Transfer 0.5 mL extract into a tube.
- 8. Add any post-extraction internal standards.
- 9. Add 0.25 mL toluene.
- 10. Evaporate at 50 °C with  $N_2$  to < 0.1 mL.
- 11. Bring volume up to 0.2 mL with toluene.
- 12. Transfer to vial with insert for analysis.

#### **GC Conditions**

Instrument: Agilent 6890N GC

Column: RTX-5MS, 30 x 0.25 mm, (0.25

µm film)

Carrier Gas: Helium

Flow Rate: 1.0 mL/min

Temp. Program: Initial 100 °C, hold 1 min, then

10 °C/min to 320 °C, hold for 7

minute

Injection Volume: 2  $\mu$ L splitless

#### **MS** Conditions

Instrument: Waters Quattro

micro GC-MS

Ionization: Electron Impact

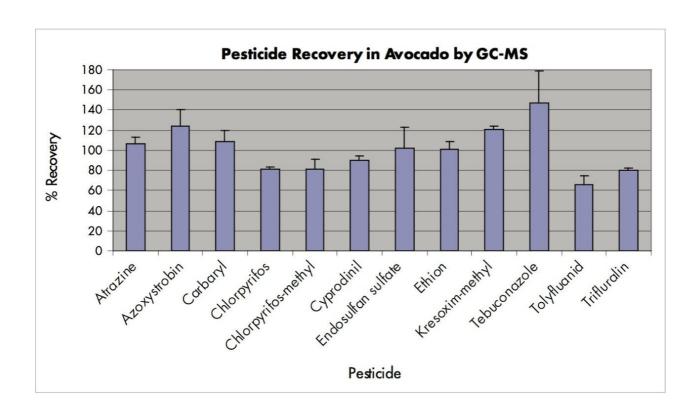
(70 eV)

Acquisition: Single Ion

Recording (SIR)

Mode

### Results and Discussion



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