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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

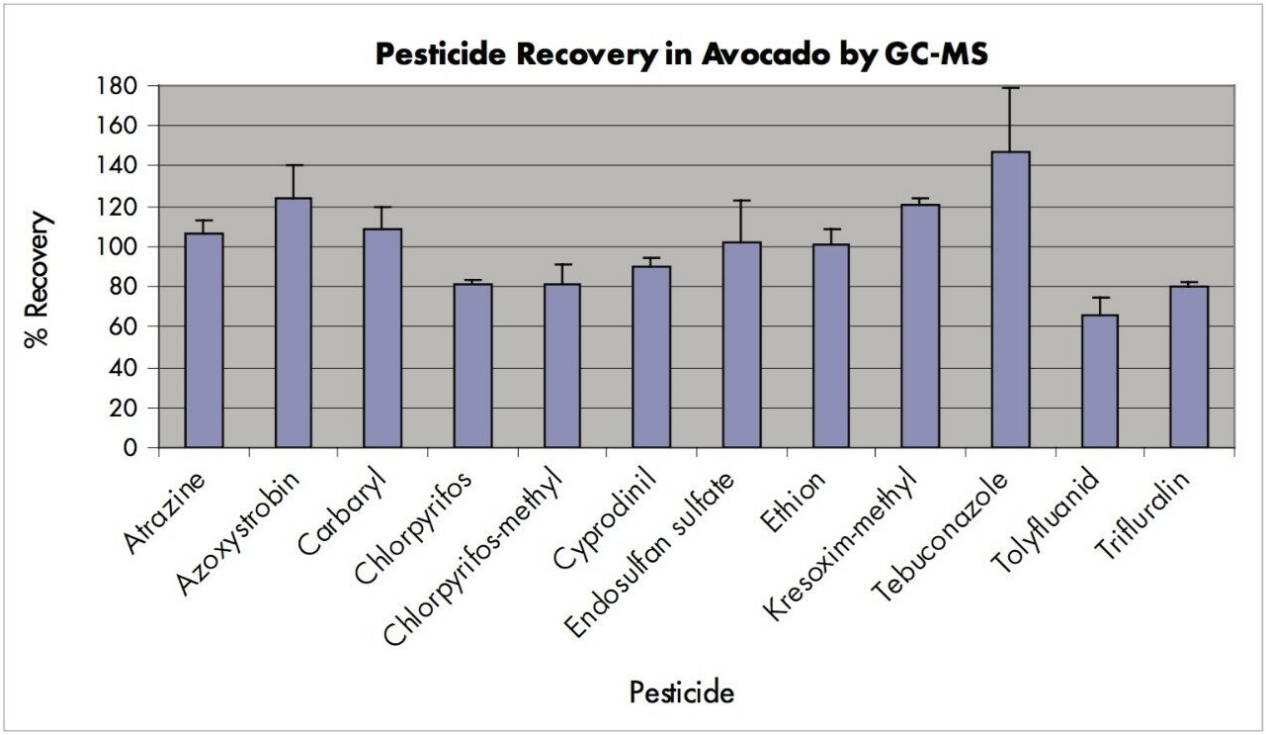
Instrument:	Agilent 6890N GC
Column:	RTX-5MS, 30 x 0.25 mm, (0.25 µm film)
Carrier Gas:	Helium
Flow Rate:	1.0 mL/min

Temp. Program:	Initial 100 °C, hold 1 min, then 10 °C/min to 320 °C, hold for 7 minute
Injection Volume:	2 µL 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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