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Nota applicativa

Multi-Residue Analysis of Pesticides in Flour Using AOAC QuEChERS Method by UPLC-MS/MS

Waters Corporation

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

Abstract

This application brief demonstrates multi-residue analysis of pesticides in flour using AOAC QuEChERS method by UPLC-MS/MS.

Experimental

Extraction Procedure

1. Add 15 mL 1% acetic acid in acetonitrile into the 50 mL DisQuE extraction tube 1.
2. Diluted 5 g flour with 10 mL water and soak for 10 min.
3. Add sample into the 50 mL tube.
4. Add any internal standards and standard mixture.
5. Shake vigorously for 1 minute and centrifuge > 1500 rcf for 5 minute.
6. Transfer 1 mL of the acetonitrile extract into the clean-up tube 2.

7. Shake for 30 seconds and centrifuge >1500 rcf for 1 minute.
8. Transfer 100 µL of final extract into an autosampler vial.
9. Add any post-extraction internal standards.
10. Dilute as needed with an appropriate buffer or solvent.

Test Conditions

LC Conditions

LC System:	Waters ACQUITY UPLC System
Column:	ACQUITY UPLC BEH C_{18}, 2.1 x 100 mm, 1.7 µm
Column Temp:	40 °C
Sample Temp:	4 °C
Flow Rate:	0.3 mL/min.
Mobile Phase A:	Water + 0.1% formic acid
Mobile Phase B:	Methanol + 0.1% formic acid
Injection Volume:	15 µL, Partial loop injection

Gradient:

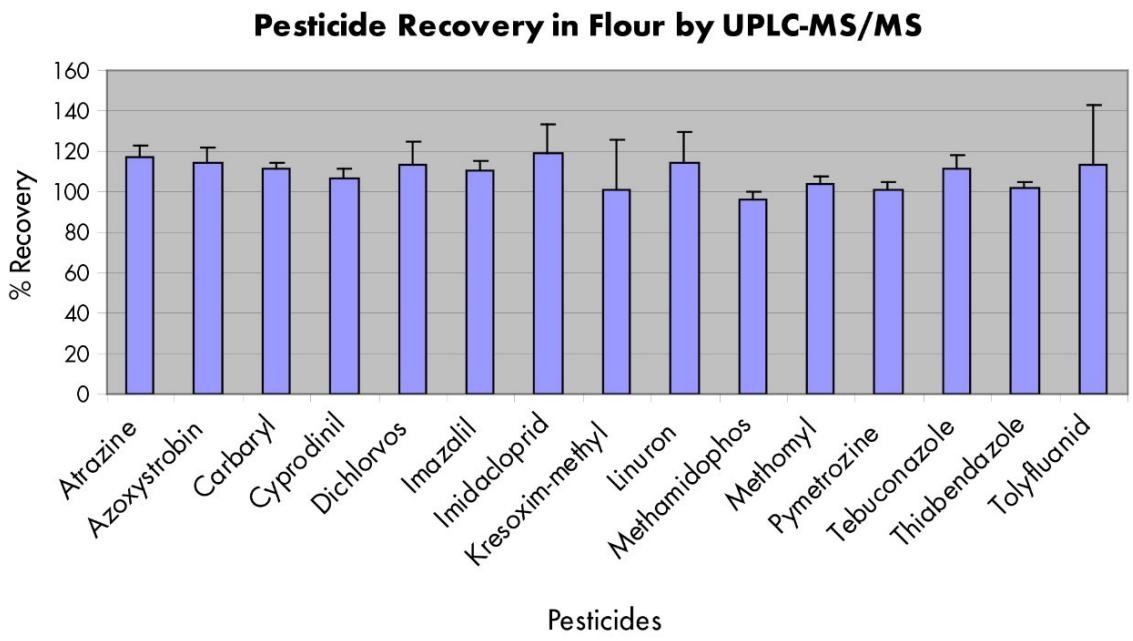
Time	Flow Rate	A%	B%
0.00	0.3	75	25
0.25	0.3	75	25

Time	Flow Rate	A%	B%
7.75	0.3	5	100
8.50	0.3	0	100
8.51	0.5	75	25
10.50	0.5	75	25
11.0	0.3	75	25

MS Conditions

Instrument:	Waters ACQUITY TQ Detector
Ionization:	Positive electrospray (ESI+)
Acquisition:	Multiple reaction monitoring (MRM)

Results and Discussion



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Featured Products

- ACQUITY UPLC System <https://www.waters.com/514207>

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