Waters™

Applikationsbericht

Multi-Residue Analysis of Pesticides in Oranges 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 highlights the multi-residue analysis of pesticides in oranges 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. Add 15 g of homogenized orange with skin 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 minute.

- 5. Transfer 1 mL of the acetonitrile extract into the 2 mL clean-up tube containing 50 mg PSA, 150 mg MgSO4, and 50 mg C18.
- 6. Shake for 30 seconds and centrifuge >1500 rcf for 1 minute.
- 7. Transfer 100 μ L of final extract into a 1.5 mL centrifuge tube.
- 8. Add any post-extraction internal standards.
- 9. Dilute as needed with an appropriate buffer or solvent.
- 10. Centrifuge > 16000 rcf for 5 minutes.
- 11. Transfer to autosampler vial.

LC Conditions

LC System: Waters ACQUITY UPLC

System

Column: ACQUITY UPLC BEH C₁₈, 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 μ L, Partial loop injection

Gradient:

Time	Flow	A%	В%
	Rate		
0.00	0.3	75	25
0.25	0.3	75	25
7.75	0.3	5	100
8.50	0.3	0	100
8.51	0.5	75	25
10.50	0.5	75	25
11.00	0.3	75	25

MS Conditions

Instrument: Waters ACQUITY TQ Detector

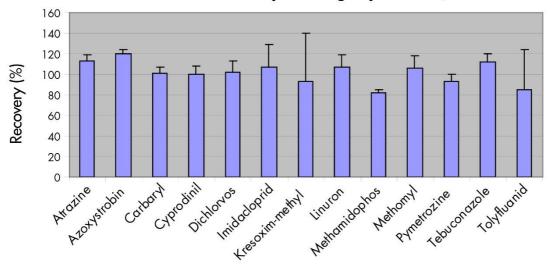
Ionization: Positive electrospray (ESI+)

Acquisition: Multiple reaction monitoring

(MRM)

Results and Discussion

Pesticide Recovery in Orange by UPLC-MS/MS



Pesticides

Pesticides in Oranges by UPLC-MS/MS

Featured Products

ACQUITY UPLC System https://www.waters.com/514207

ACQUITY UPLC Tunable UV Detector https://www.waters.com/514228

720003366, March 2010

©2019 Waters Corporation. All Rights Reserved.