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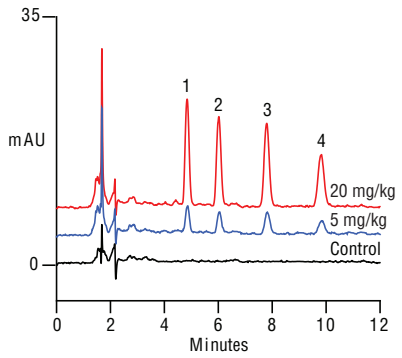
Nitrofuran Antibiotics in Animal Feed on a Thermo Scientific™ Acclaim™ 120 C18 Column



Reference:
R.J. McCracken, D.G. Kennedy;
J. Chromatogr. A, **1997**, *771*, 349–354.

Column:	Thermo Scientific™ Acclaim™ 120 C18, 5 µm, 4.6 × 150 mm
Pump:	Thermo Scientific™ Dionex™ Summit P680A DGP-6
Mobile Phase:	Acetonitrile:10 mM ammonium acetate pH 5.0, 20:80 v/v; isocratic
Flow:	1.0 mL/min
Temperature:	30 °C
Injection:	Dionex Summit ASI100, 20 µL
Detector:	SDionex ummit UVD340U diode array, 365 nm, and spectra 200–500 nm

Sample Preparation:
1. 3.0 g guinea pig feed in a 50 mL centrifuge tube
2. Add 9 mL water and let stand 5 min.
3. Add 21 mL methanol:acetonitrile 1:1 and extract for 30 min.
4. Pass through cleanup cartridge containing 1.7g of neutral alumina; discard first 1.7 mL, retain next 3.5 mL

Peaks:
1. Nitrofurazone
2. Nitrofurantoin
3. Furazolidone
4. Furaltadone

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Nitrofuran antibiotics are now banned from use in many parts of the world, making it necessary to monitor for illegal or accidental contamination of animal feeds. The Acclaim 120 C18 column will resolve these four common drugs easily even in a complex feed matrix.

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