

Nalidixic Acid Antibiotics by LC-MS, 5.0 Minute Gradient – 2.1 x 20 mm Intelligent Speed Separation

Waters Corporation



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

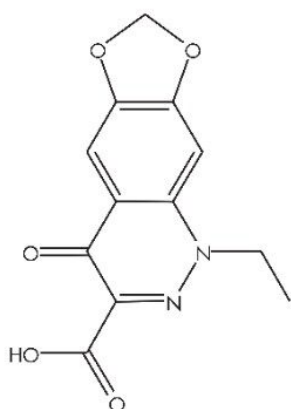
Abstract

This application brief details on the analysis of nalidixic acid antibiotics by LC-MS.

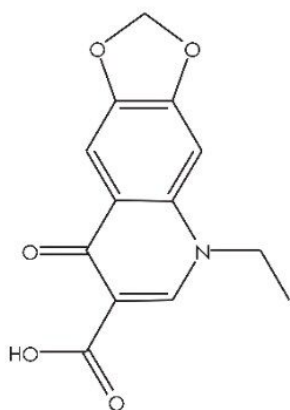
Introduction

The compounds analyzed in this study are:

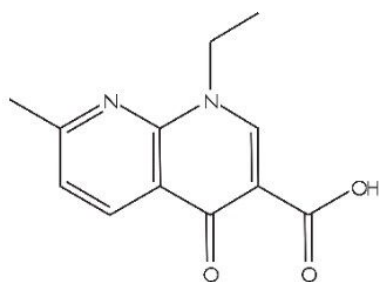
Compound	MW
1. Cinoxacin	262.2
2. Oxolinic Acid	261.2
3. Nalidixic Acid	232.2



Cinoxacin



Oxolinic acid



Nalidixic acid

Experimental

LC Conditions

Column:	Atlantis dC ₁₈ , 2.1 x 20 mm IS, 3.0 µm, (P/N: 186002058)
Mobile phase A:	Water
Mobile phase B:	Methanol
Mobile phase C:	1% HCOOH in Water
Flow rate:	0.4 mL/min
Injection volume:	2 µL
Sample concentration:	10 µg/mL
Temperature:	30°C
Instrument:	Alliance 2795 and Waters ZQ

Gradient

Time (min)	Profile		
	%A	%B	%C
0.0	60	30	10
5.0	40	50	10

MS Conditions

Waters ZQ

ES+

Capillary (kV): 3.5

Cone (V): 5.0

Extractor: 3.0

RF lens: 0.1

Source temp. (°C): 150

Desolvation temp. (°C): 400

Cone gas flow (L/Hr): 50

Desolvation gas fLow(L/Hr): 500

LM resolution: 15

HM resolution: 15

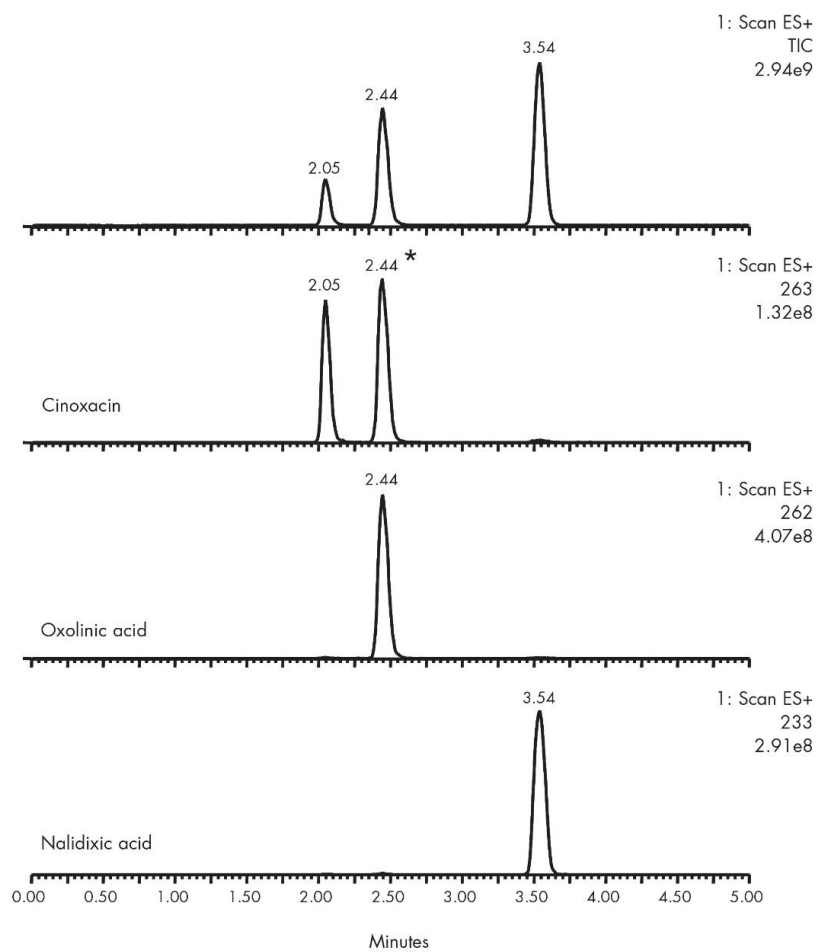
Ion energy: 0.5

Multiplier (V): 650

Results and Discussion

The top figure is the total ion current, followed by the extracted ion signals for each of the three analytes.

*The "extra" peak in the cinoxacin panel is the isotope from oxolinic acid.



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WA31787.15, June 2003

