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Nota applicativa

Nalidixic Acid Antibiotics by LC-MS

Waters Corporation

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

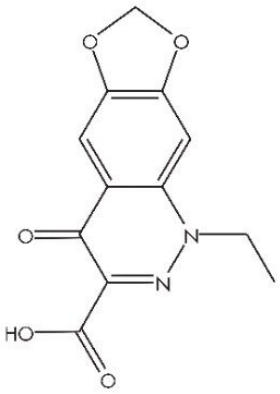
Abstract

This application brief demonstrates analysis of nalidixic acid antibiotics by LC-MS.

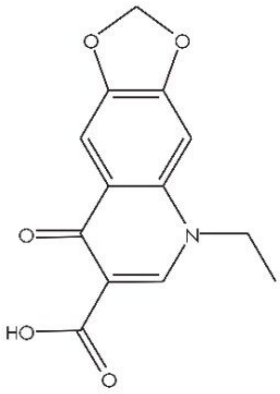
Introduction

The compounds used in this study are –

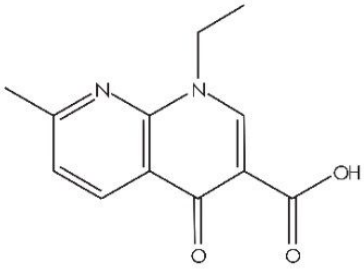
Compound	MW
1. Cinoxacin	262.2
2. Oxolinic Acid	261.2
3. Nalidixic Acid	232.2



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	50	40	10
1.0	30	60	10

MS Conditions

Waters ZQ

ES+ capillary (kV):	3.5

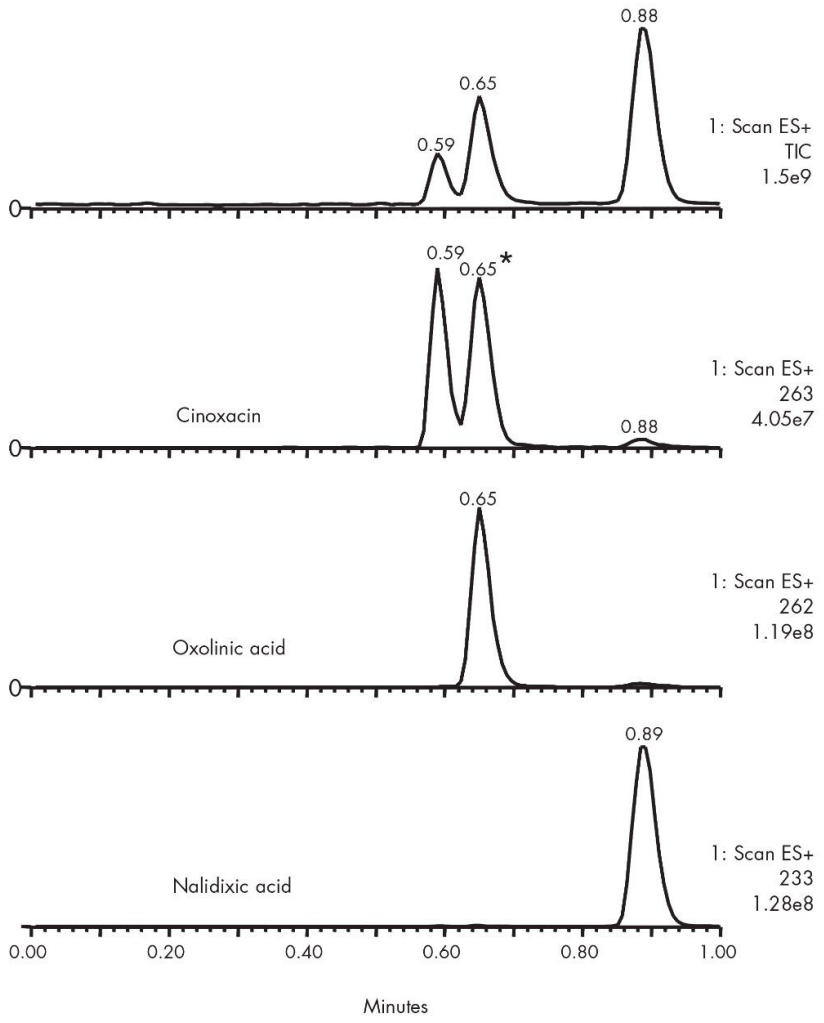
Waters ZQ

Cone (V):	5
Extractor:	3
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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