Nalidixic Acid Antibiotics by LC-MS, 3.0 Minute Gradient – 2.1 x 20 mm Intelligent Speed Separation

Waters Corporation

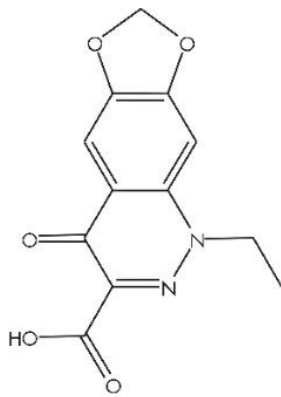This is an Application Brief and does not contain a detailed Experimental section.

Abstract

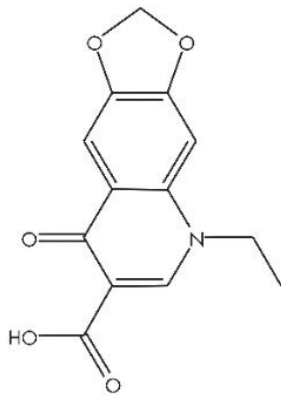This application brief details on the analysis of nalidixic acid antibiotics by LC-MS.
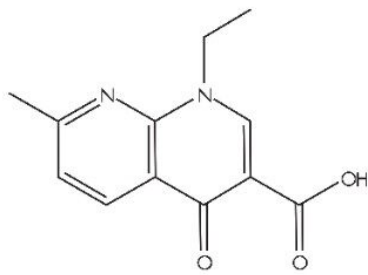
Introduction

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
3.0	40	50	10

MS Conditions

Waters ZQ

ES+

Capillary (kV):	3.5

Cone (V):   5.0
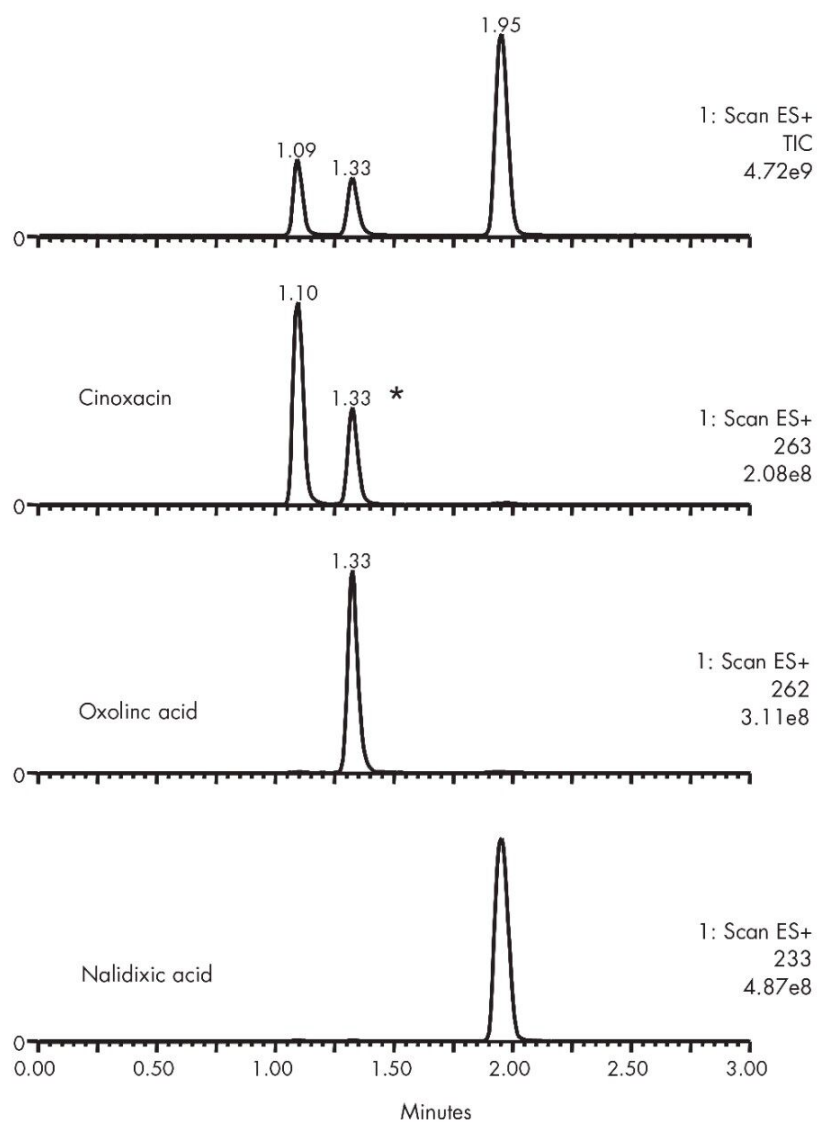
Extractor: 3.0

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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