

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

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Waters Corporation



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

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# Abstract

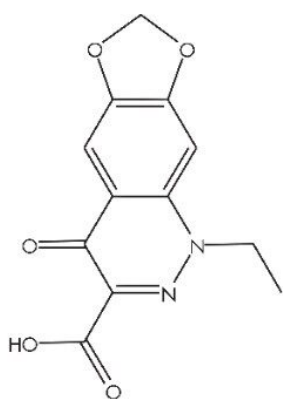
This application brief details on the analysis of nalidixic acid antibiotics by LC-MS.

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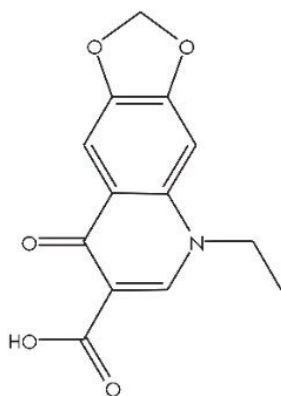
# Introduction

The compounds analyzed in this study are:

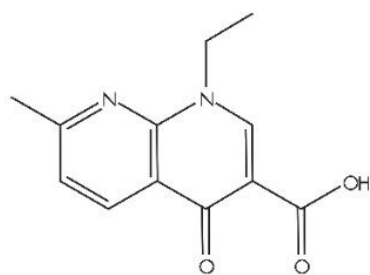
| Compound          | MW    |
|-------------------|-------|
| 1. Cinoxacin      | 262.2 |
| 2. Oxolinic Acid  | 261.2 |
| 3. Nalidixic Acid | 232.2 |



Cinoxacin



Oxolinic acid



Nalidixic acid

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Experimental

## LC Conditions

|                       |                                                                      |
|-----------------------|----------------------------------------------------------------------|
| Column:               | Atlantis dC <sub>18</sub> , 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<br>(min) | Profile |    |    |
|---------------|---------|----|----|
|               | %A      | %B | %C |
| 0.0           | 60      | 30 | 10 |
| 3.0           | 40      | 50 | 10 |

## MS Conditions

Waters ZQ

ES+

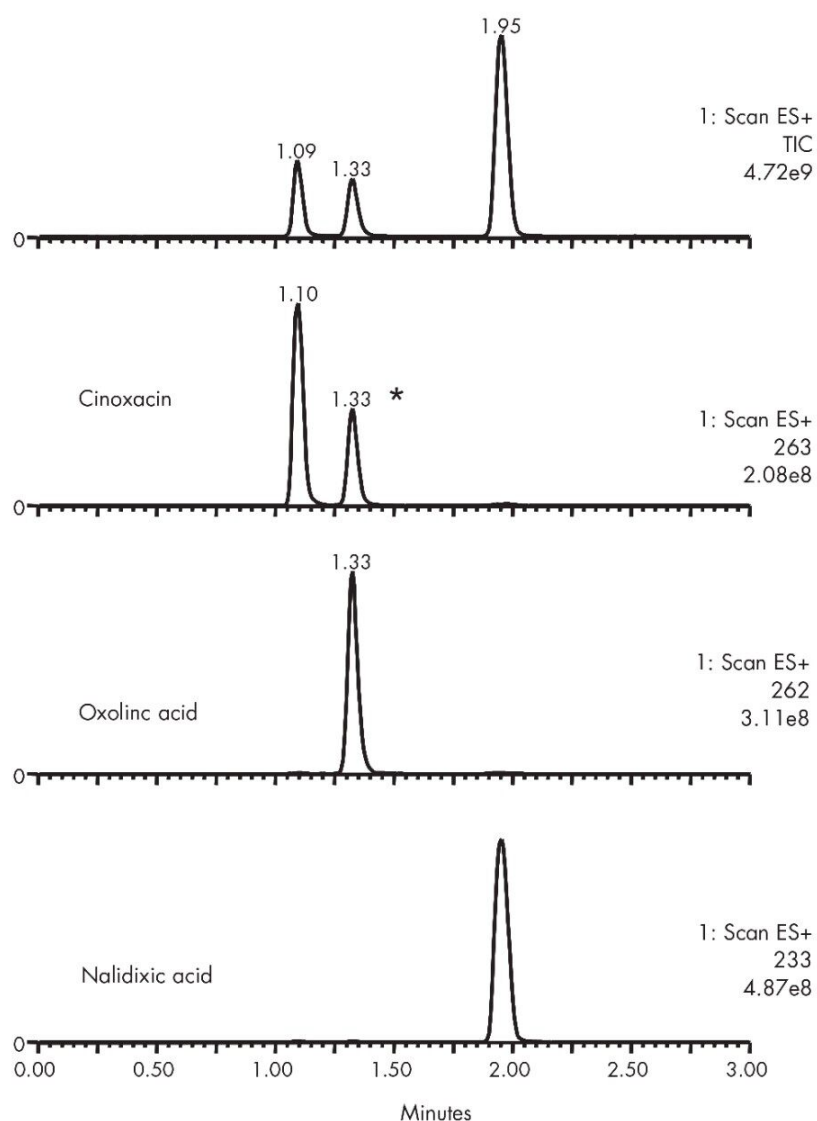
|                             |     |
|-----------------------------|-----|
| Capillary (kV):             | 3.5 |
| Cone (V):                   | 5.0 |
| Extractor:                  | 3.0 |
| RF lens:                    | 0.1 |
| Source temp. (°C):          | 150 |
| Desolvation temp. (°C):     | 400 |
| 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 |

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## 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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## Featured Products

Alliance HPLC System <<https://www.waters.com/534293>>

WA31787.16, June 2003

