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アプリケーションノート

# Nalidixic Acid Antibiotics by LC-MS

Waters Corporation

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

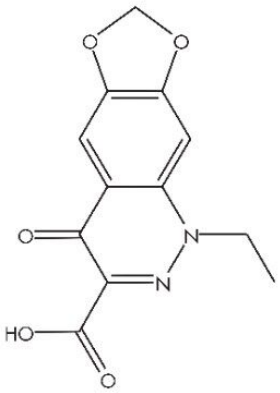
## Abstract

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

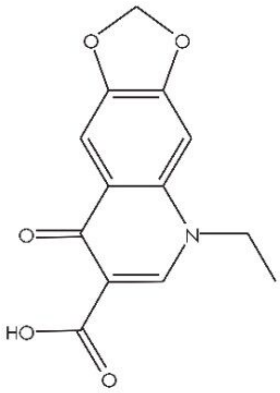
## Introduction

The compounds used in this study are –

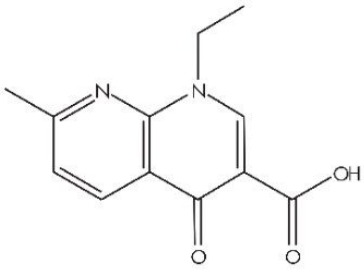
| Compound | MW |
|---|---|
| 1. Cinoxacin | 262.2 |
| 2. Oxolinic Acid | 261.2 |
| 3. Nalidixic Acid | 232.2 |




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 |
| Cone (V): | 5 |

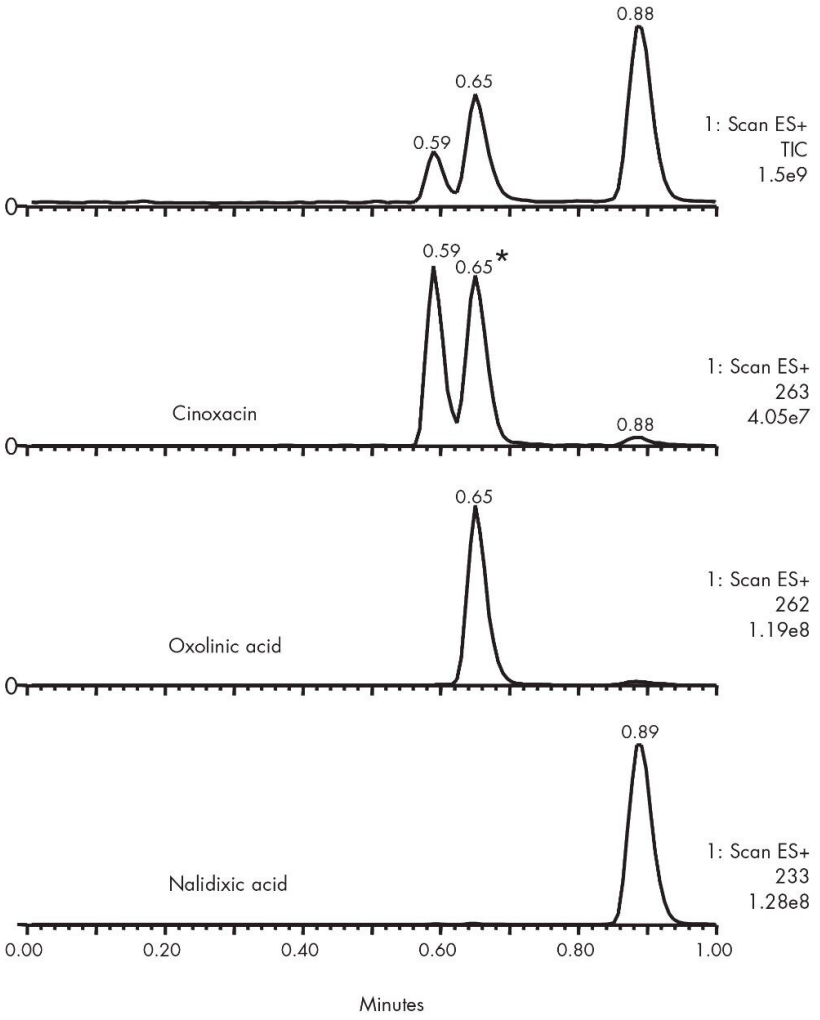
Waters ZQ

| | |
|---|---|
| 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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WA31787.18, June 2003