SHIMADZU

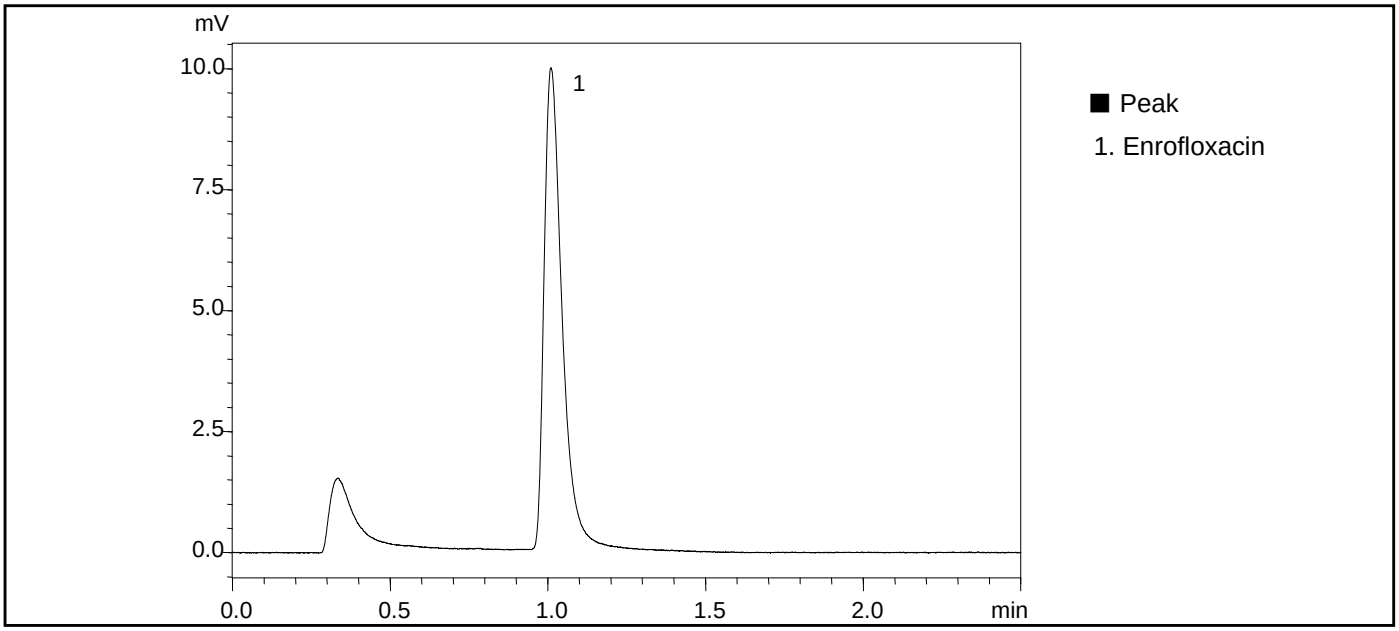
Prominence UFLC UFLCXR
ULTRA FAST LIQUID CHROMATOGRAPH

Application Data Sheet

High Performance Liquid Chromatography No. 77

High Speed Analysis of Enrofloxacin

Enrofloxacin is a synthetic new quinolone antimicrobial agent. It is used for the treatment and prevention of pneumonia and Escherichia coli diarrhea symptoms in cows and pigs. Here we present an example of high speed analysis of enrofloxacin using fluorescence detection.



Analysis of Enrofloxacin

[Sample Preparation]

A concentration of 10 μg/L standard sample of enrofloxacin was prepared using McIlvain buffer.

[Mobile Phase Preparation]

1) Exactly 14.33 g of sodium dihydrogen phosphate 12-hydrate ($Na_2HPO_4 \cdot 12H_2O$) was measured and placed in a 200 mL measuring flask, and the entire amount was titrated to 200 mL in purified water to create solution A.
2) 2) Exactly 4.2 g of citric acid hydrate ($C_6H_8O_7 \cdot H_2O$) was measured and placed in a 200 mL measuring flask, and the entire amount was titrated to 200 mL in purified water to create solution B.
3) Solutions A and B were mixed to a specific volume of 1:4 to prepare a McIlvain buffer of pH 3.0.
4) This McIlvain buffer was mixed with acetonitrile to a specific volume of 85:15 to prepare the mobile phase.

Analytical Conditions

Instrument	: Prominence UFLC system
Column	: Shim-pack XR-ODS (75 mm L × 2.0 mm *I.D.*)
Mobile Phase	: McIlvain buffer (pH 3.0) / Acetonitrile = 85 / 15 (v/v)
Flow Rate	: 0.5 mL/min
Column Temperature	: 40 °C
Detection	: Fluorescence Ex. at 285 nm, Em. at 460 nm with Conventional flow cell
Sample Volume	: 2 µL

SHIMADZU
SHIMADZU CORPORATION. International Marketing Division
3, Kanda-Nishikicho 1-chome, Chiyoda-ku, Tokyo 101-8448, Japan Phone. 81(3)3219-5641 Fax. 81(3)3219-5710
URL http://www.shimadzu.com

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