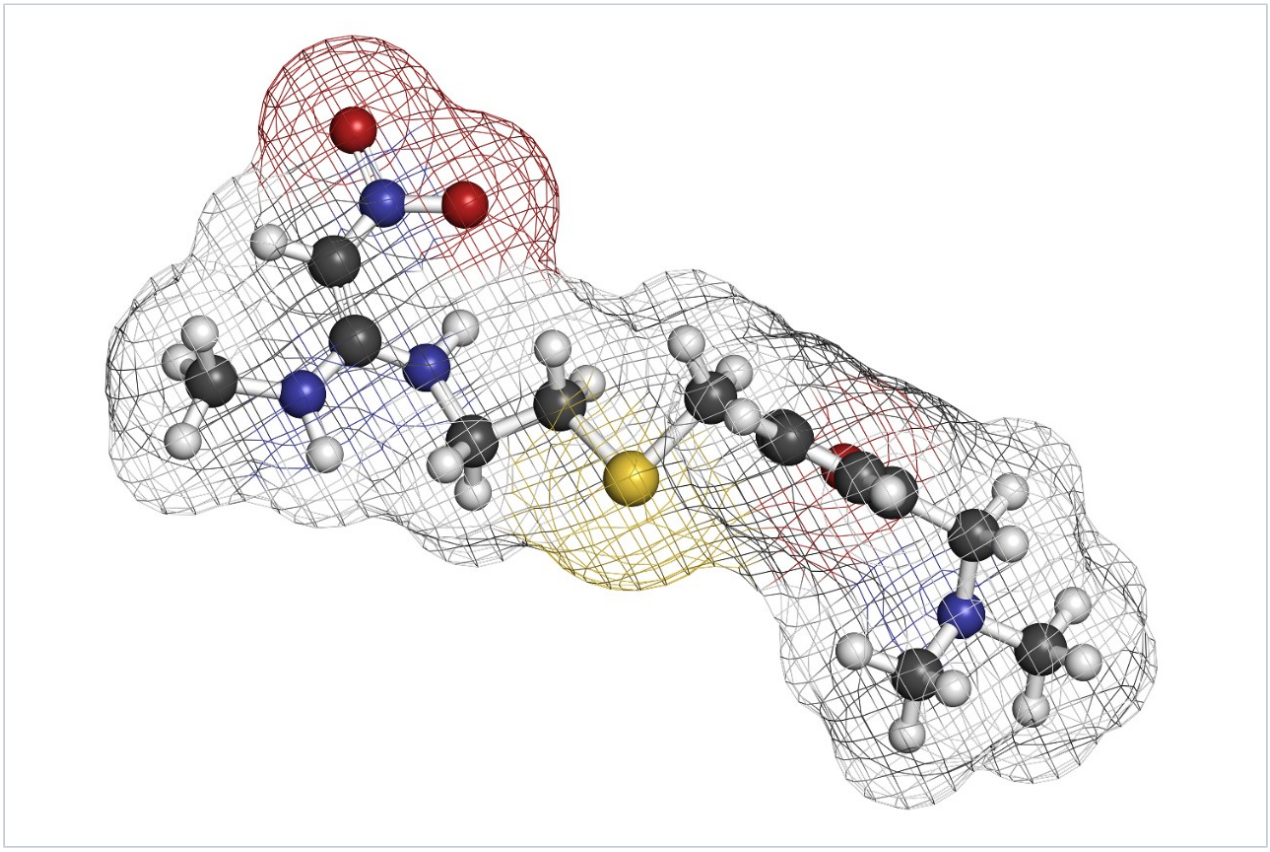
Waters™

Nota applicativa

Ranitidine in Rat Plasma (H_2 Blocker)

Waters Corporation



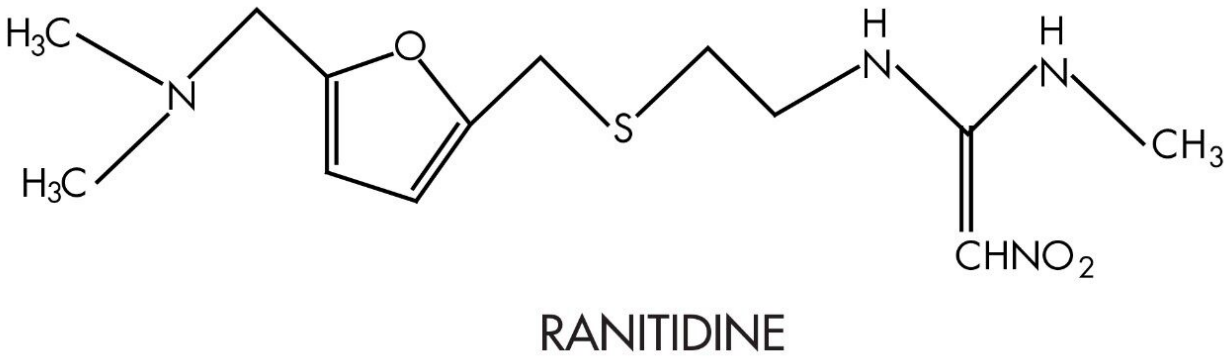
This is an Application Brief and does not contain a detailed Experimental section.

Abstract

This application brief demonstrates analysis of ranitidine in rat plasma.

Introduction

The compound analyzed in this study is ranitidine.



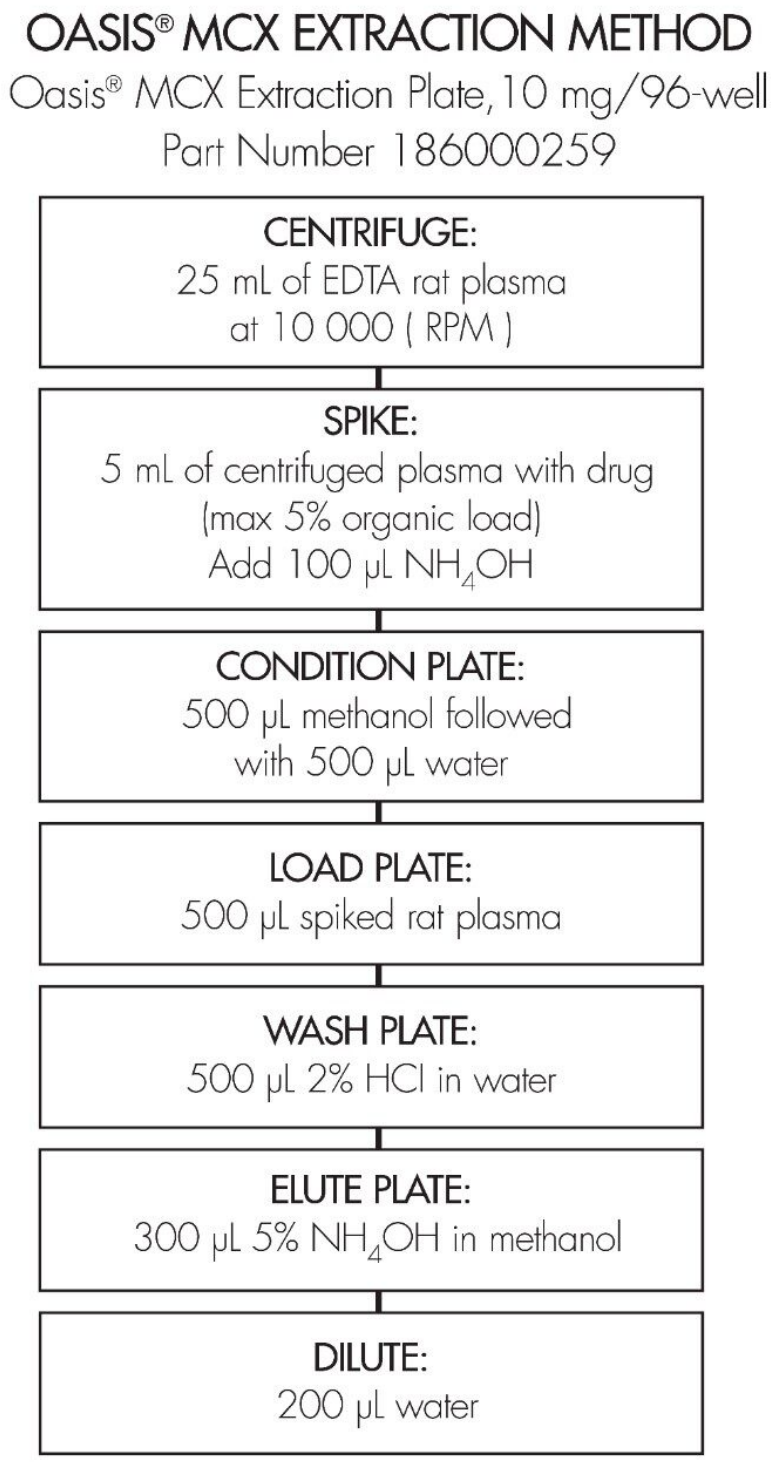
RANITIDINE

Experimental

HPLC Method

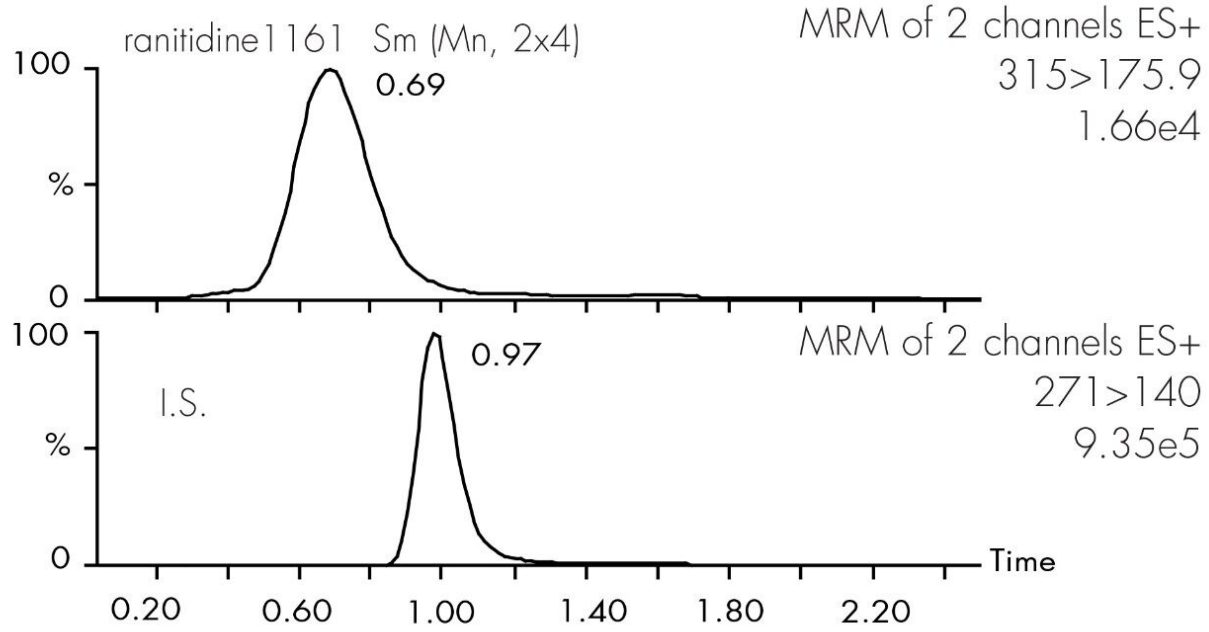
Column:	Xterra MS C_{18} 2.1 x 30 mm, 3.5 µm
Part number:	186000398
Mobile phase A:	100 mM NH_4COOH
Mobile phase B:	ACN
Isocratic mobile phase composition:	30% A; 70% B
Flow rate:	0.2 mL/min
Injection volume:	15 µL

Detection:	MS ESI^+
Instrument:	Alliance 2790, Micromas Quattro Ultima
Ion source:	ESI^+
Source temperature:	150 °C
Gas cell:	$1.5e^{-3}$ mbar, 20eV
Desolvation temperature:	350 °C
Cone gas flow:	150 L/hr
Drying gas flow:	600 L/hr
Cone voltage:	20V

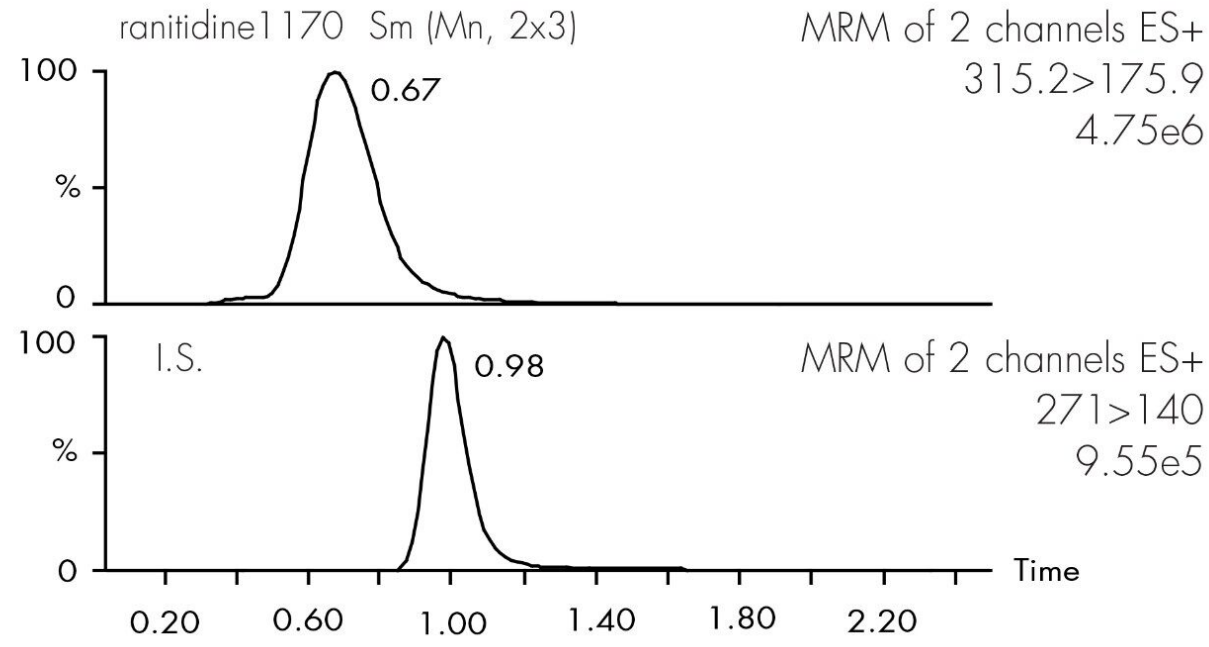


Results and Discussion

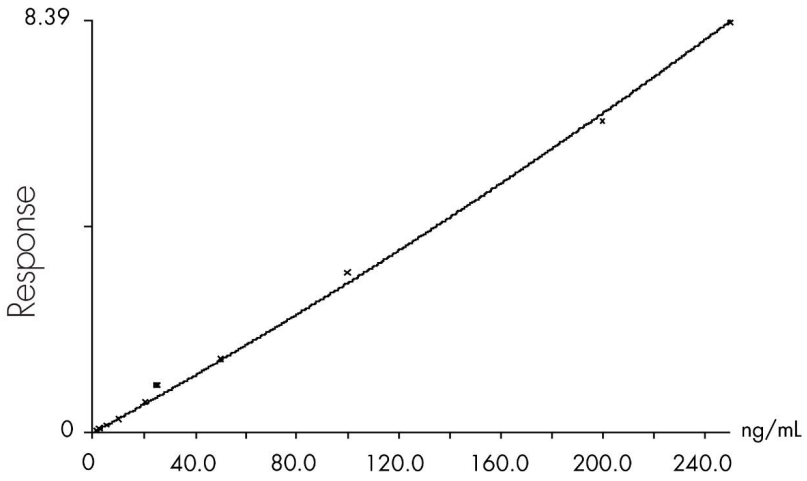
Plasma spike 1.0 ng/mL, 70/30 ACN/H_2O 0.1 M NH_4 Formate



Plasma spike 250 ng/mL, 70/30 ACN/H_2O 0.1 M NH_4 Formate



Compound name: Ranitidine
Coefficient of Determination: 0.999099
Calibration curve: 2.002205e-5* x^2 + 0.0284745* x + 0.00311700
Response type: Internal Std (Ref 1), Area* (IS Conc./IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: $1/x^2$, Axis trans: None



RANITIDINE (MCX) (ng/mL)	Mean	Standard deviation	Coefficient of variation (%)	Recovery (%)
1	0.99 (5)	0.02	2	99
2.5	2.54	0.11	4.3	100
5	4.9	0.3	6.1	98
10	10.26	0.68	6.6	102
20	19.46	0.97	4.9	97
50	49.78	2.51	5	99
100	101.55	5.31	5.2	101
200	201.97	4.67	2.3	101
250	247.09	1.4	0.5	99

Featured Products

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

WA31764.137, June 2003