Waters™

アプリケーションノート

Clemastine in Rat Plasma - Oasis On-Line (2 Column Approach (Using XTerra Oasis HLB Extraction Column 2.1 × 20 mM, 25 mM, XTerra Analytical Column 2.1 × 30, 3.5 mM)

Waters Corporation

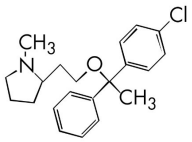
This is an Application Brief and does not contain a detailed Experimental section.

Abstract

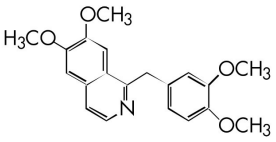
This application brief highlights the analysis of clemastine in rat plasma using Oasis HLB extraction method.

Introduction

Clemastine has been studied in this application brief.



CLEMASTINE



PAPAVERINE I.S.

Experimental

Conditions

LC_1:	Alliance 2790 - 0.4 mL/min
LC_2:	Waters 515–4.0 mL/min
Loading mobile phase:	100% water
Eluting mobile phase:	1 minute gradient 5% ACN to 95% ACN
Eluting mobile phase additive:	0.5% Formic acid
Extraction column temp.:	40 °C
Switching valve:	Rheodyne LabPro 10 ports, 2 position
MS:	Waters Micromass Quattro Ultima Triple Quadrupole
Ion source:	ESI+
Source temp.:	150 °C
Gas cell:	$1.5e^{-3}$ mbar

Desolvation gas:	600 L/hr
Cone voltage:	20 V
Collision energy:	20

Gradient

Time	HPLC gradient flow 0.4 mL/min		Valve position
	A	B	
0.0	5	95	
0.5			Switch position 2 to 1
1.0	95	5	
2.60	95	5	
2.90			Switch position 1 to 2
3.0	5	95	

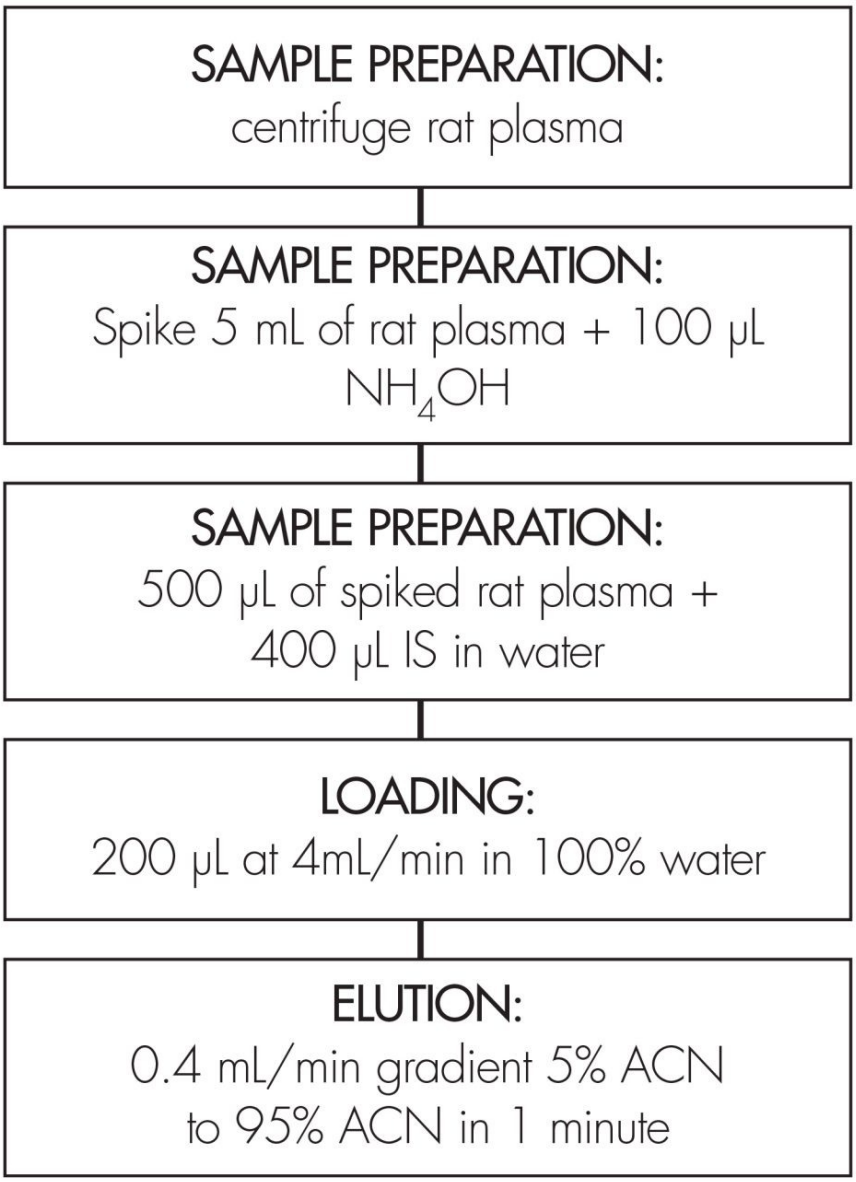
A - Acetonitrile + 0.5% formic acid
B - Water + 0.5% formic acid

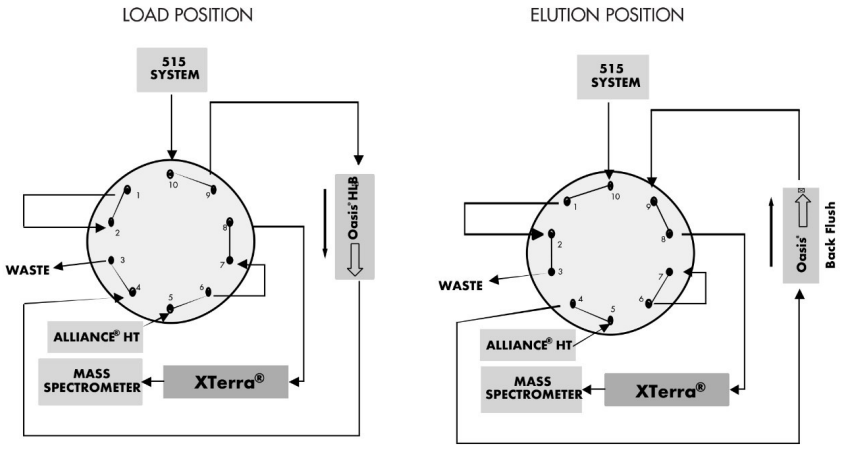
A - Acetonitrile + 0.5% Formic Acid

B - Water + 0.5% Formic Acid

OASIS® HLB EXTRACTION METHOD

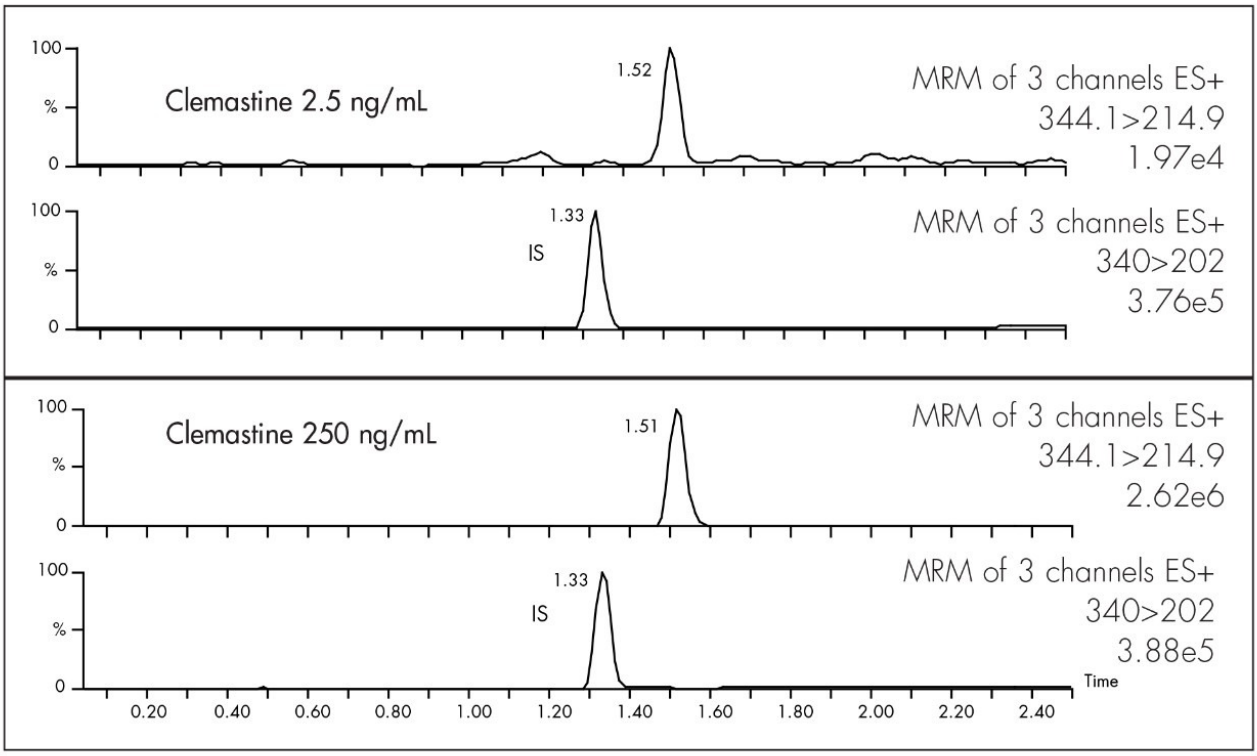
Oasis® HLB Extraction Column 2.1 x 20 mm, 25 µm
Part Number 186000706



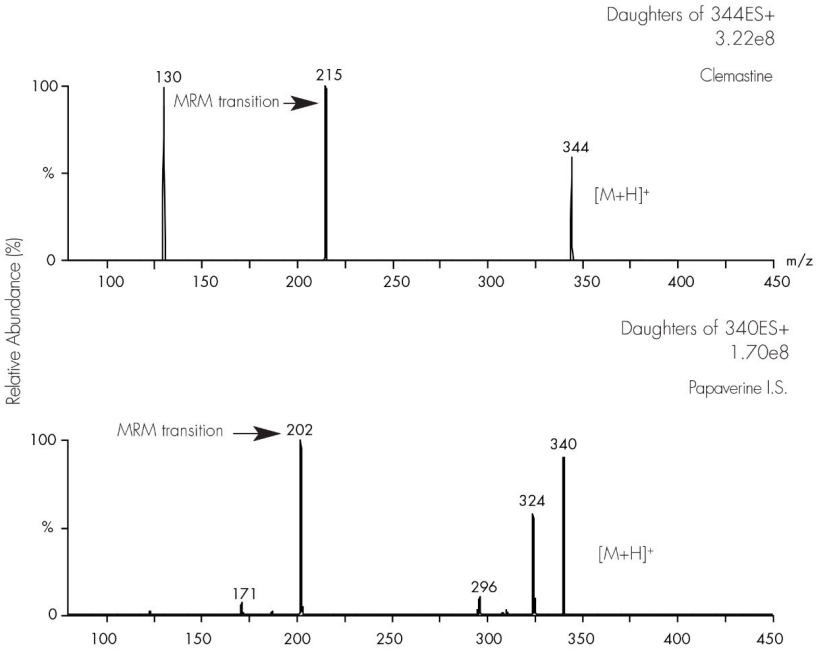


Results and Discussion

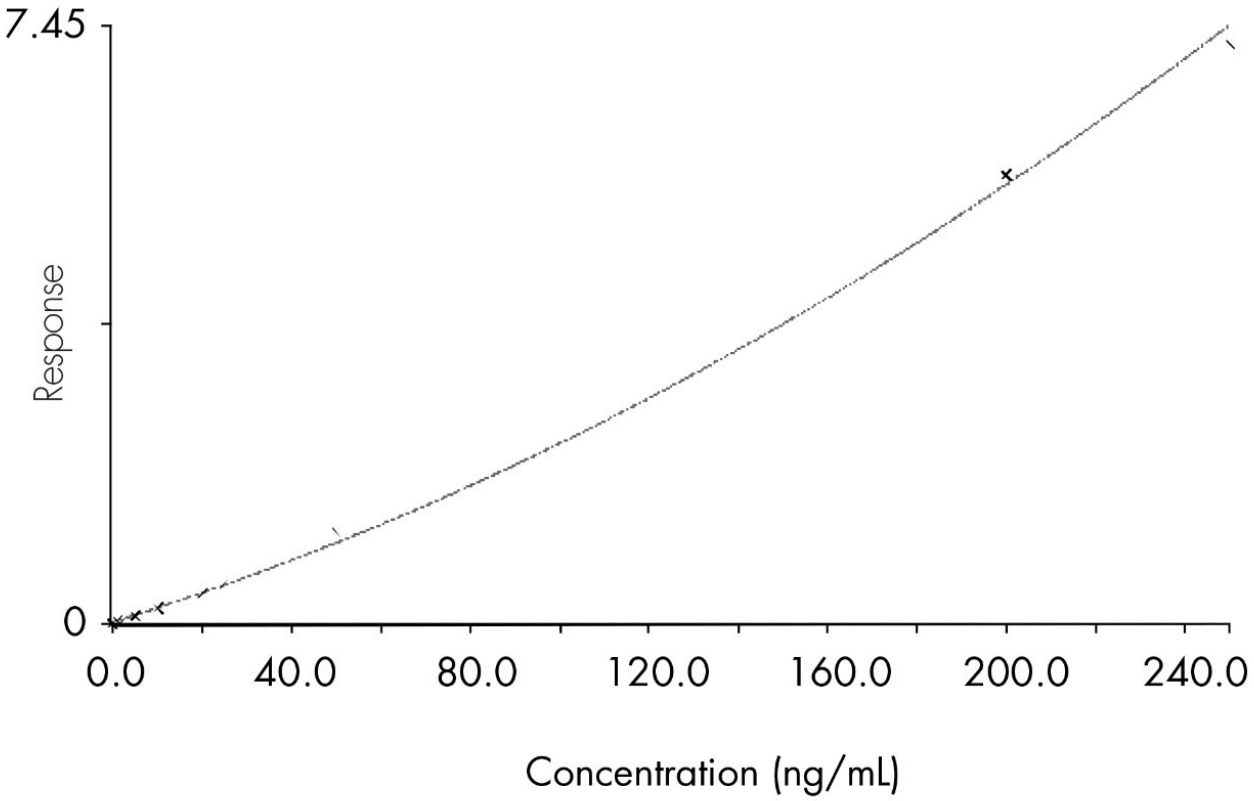
OASIS® HLB /XTERRA® LC/MS/MS ANALYSIS OF CLEMASTINE at 2.5 ng/mL and 250 ng/mL



CID MASS SPECTRA



Coefficient of Determination: 0.998500
Calibration curve: 5.01311e-5 * x^2 + 0.0172052* x + 0.0166854
Response type: Internal Std (Ref 1), Area* (IS Conc./IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: $1/x^2$, Axis trans: None



Conc. ng/mL N-6	Average	Standard deviation	RSD%
1	1.01	0.01	1.3
5	4.8	0.1	2.0
10	9.7	0.2	1.7
20	20.3	0.9	4.4
25	24.3	0.9	3.5
200	206.9	4.2	2.0
250	243.1	3.1	1.3

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Alliance HPLC <https://www.waters.com/514248>

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