Waters™

アプリケーションノート

Clemastine In Rat Plasma - Oasis On-Line 1 Column Approach

Waters Corporation

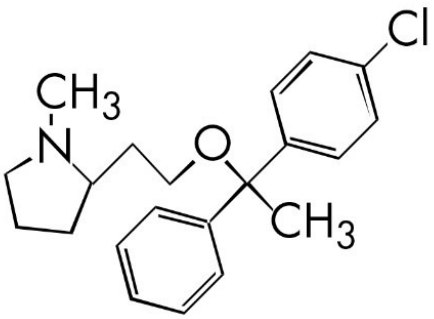
This is an Application Brief and does not contain a detailed Experimental section.

Abstract

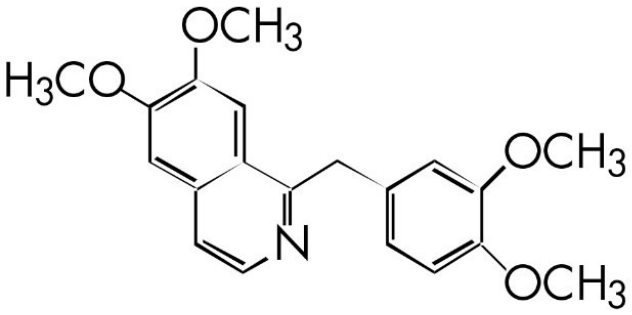
This application brief highlights the analysis of clemastine In rat plasma using Oasis on-line 1 column approach method.

Introduction

Clemastine is studied in this application brief.



CLEMASTINE



PAPAVERINE I.S.

Experimental

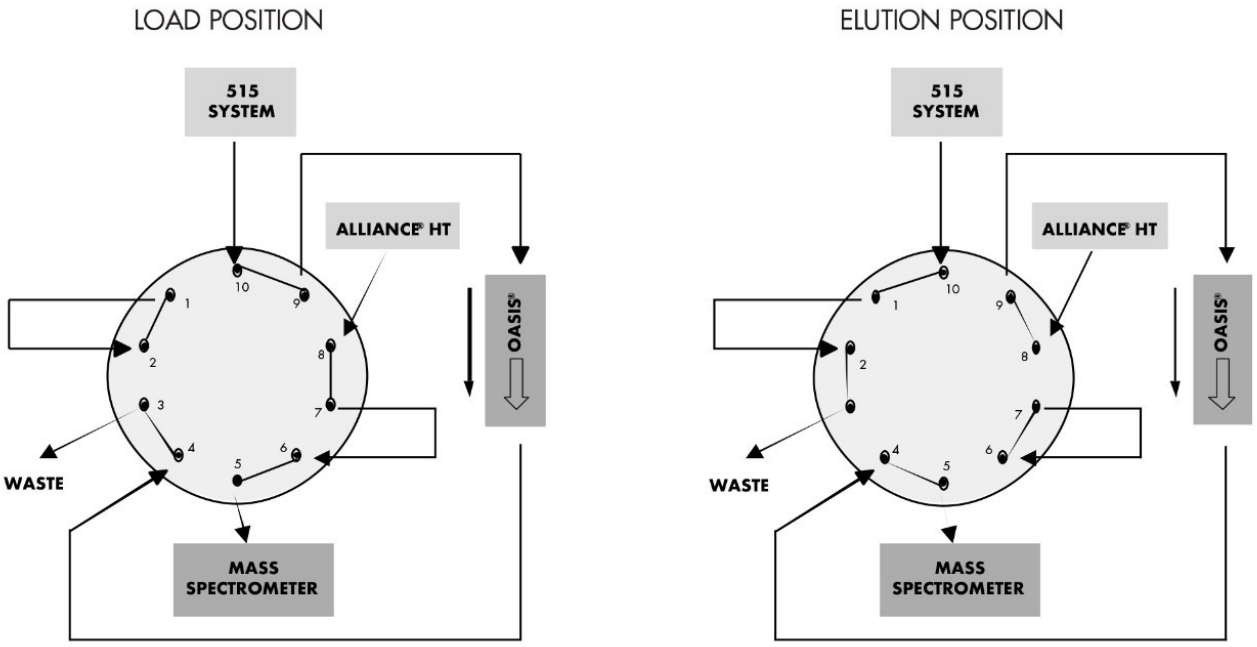
Wash Conditions

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:	Quattro Ultima Triple Quadrupole
Ion source:	ESI+

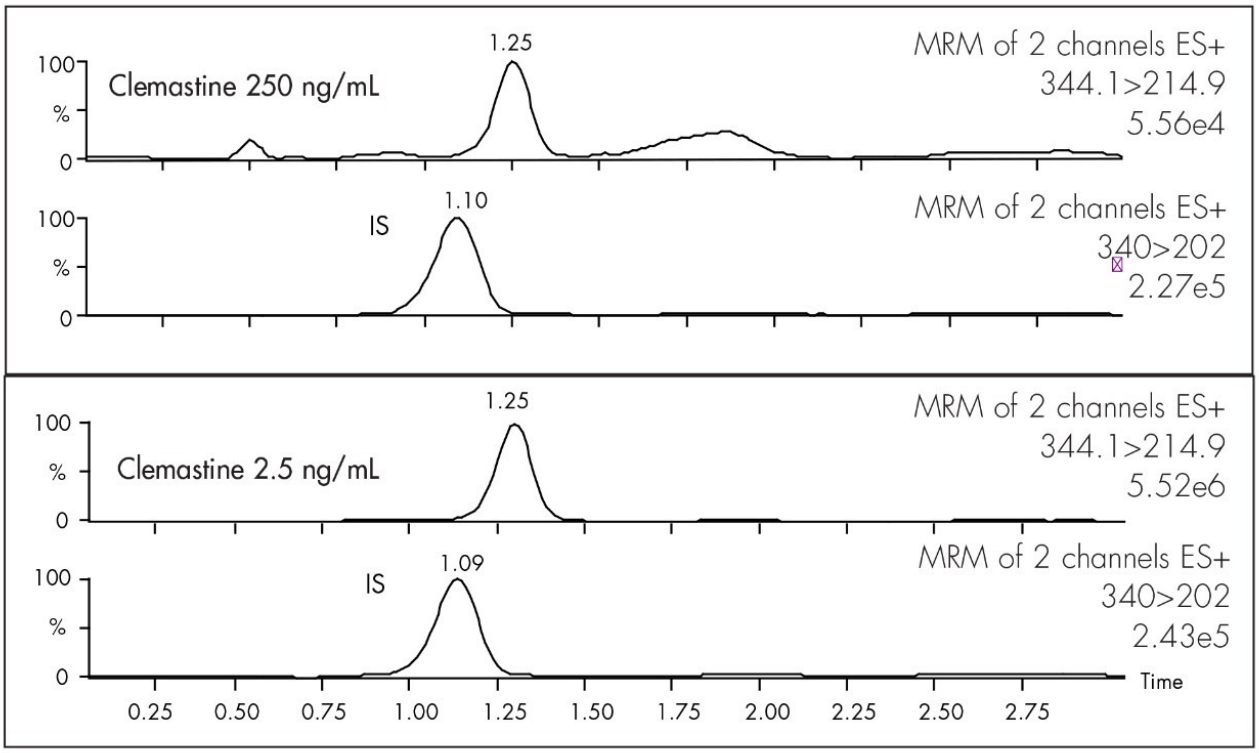
Source temp.:	150 °C
Gas cell:	$1.5e^{-3}$ mbar
Desolvation gas:	600 L/hr
Cone voltage:	20 V
Collision energy:	20

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	

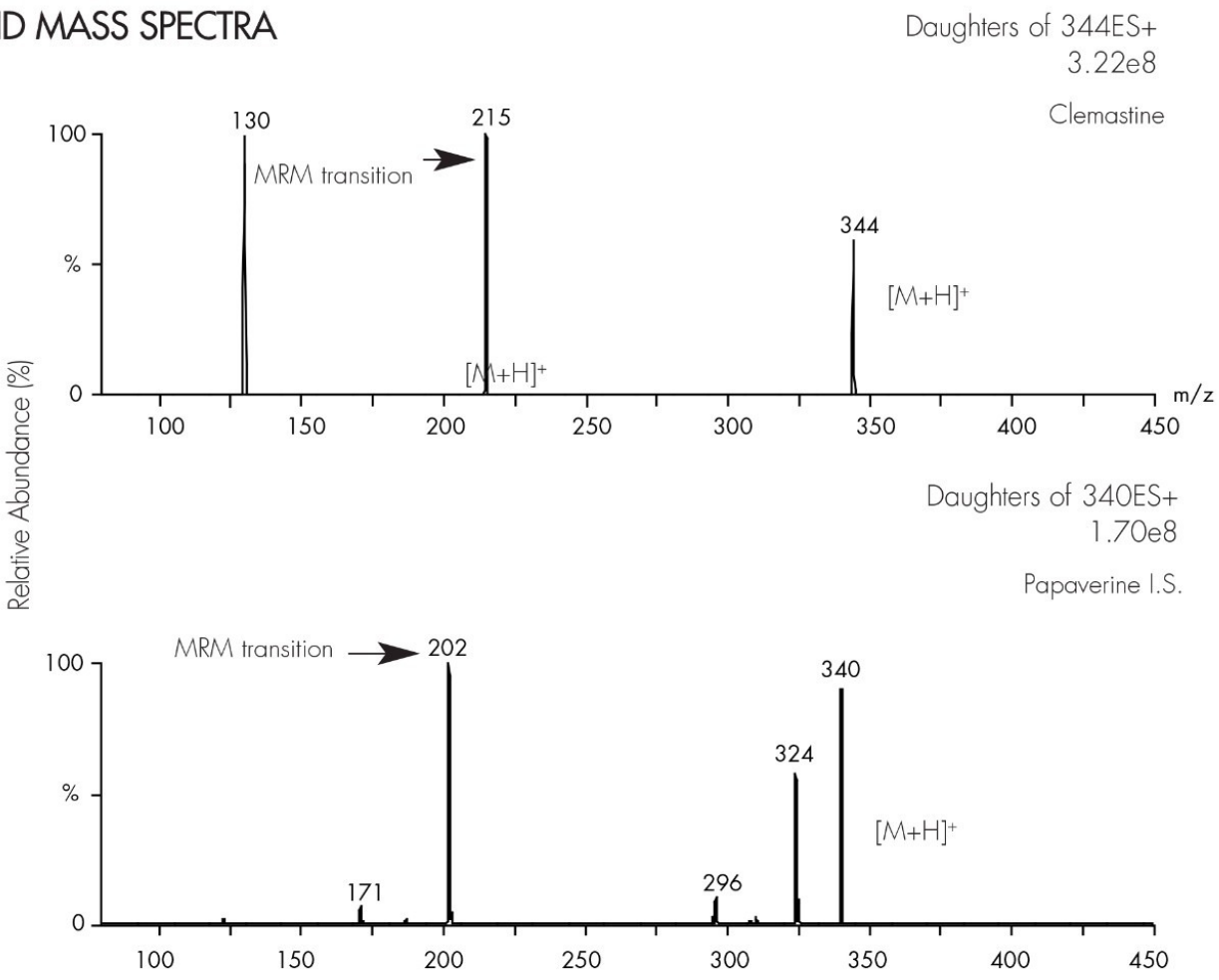
A - Acetonitrile + 0.5% formic acid
B - Water + 0.5% formic acid



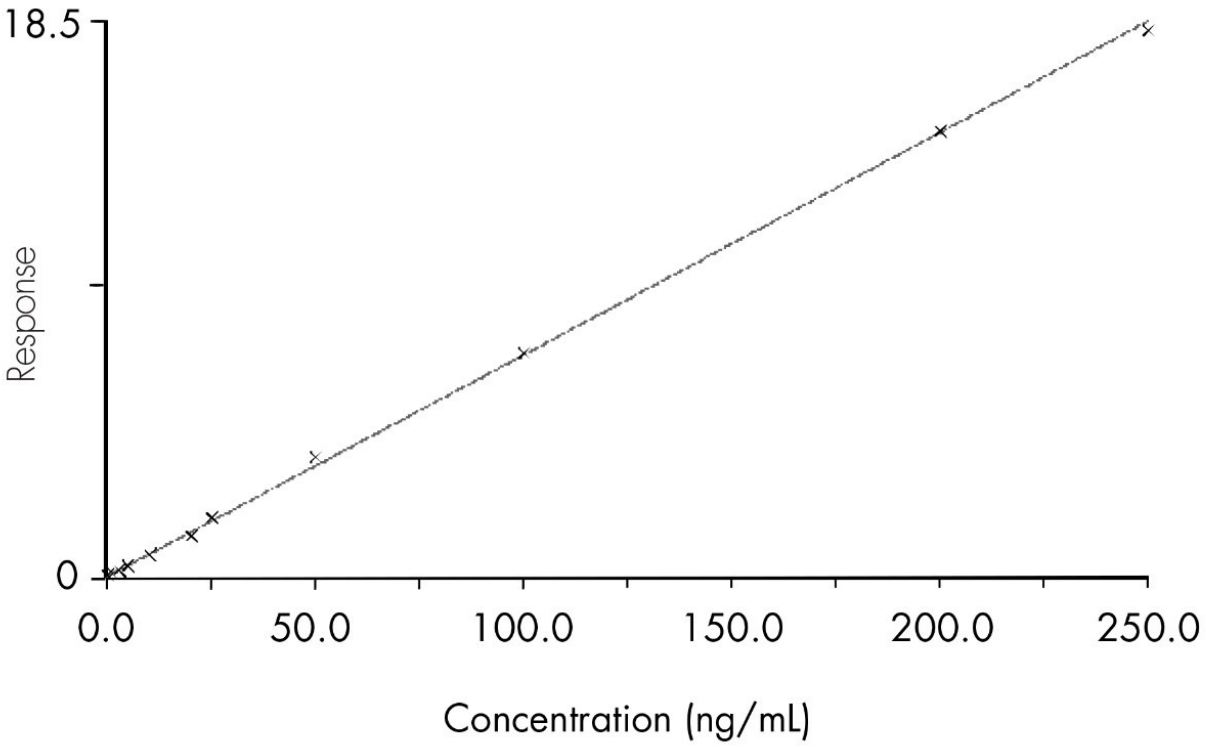
Results and Discussion


Clemastine 250 ng/mL
1.25
MRM of 2 channels ES+
344.1>214.9
5.56e4
IS
1.10
MRM of 2 channels ES+
340>202
2.27e5
Clemastine 2.5 ng/mL
1.25
MRM of 2 channels ES+
344.1>214.9
5.52e6
IS
1.09
MRM of 2 channels ES+
340>202
2.43e5
100
%
0
Time
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
2.25
2.50
2.75

CID MASS SPECTRA



Coefficient of Determination: 0.999397
Calibration curve: 1.59441e-6 * x^2 + 0.0733900* x + 0.00620068
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 variation	RSD (%)
1.0	0.98	0.02	2.1
2.5	2.56	0.11	4.4
5.0	5.25	0.12	2.3
10.0	9.50	0.25	2.7
100.0	101.43	2.69	2.6
200.0	201.14	3.20	1.6
250.0	247.10	1.58	0.6

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