Waters™

Application Note

Tricyclic Antidepressants Using LC-MS

Waters Corporation

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

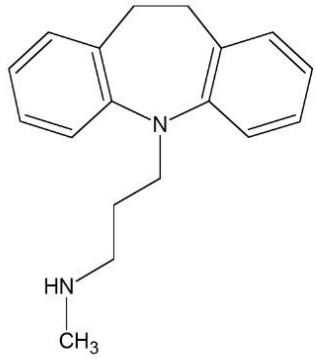
Abstract

This application brief demonstrates analysis of tricyclic antidepressants using LC-MS.

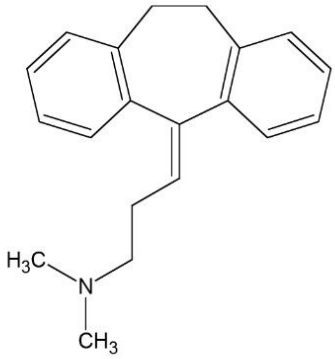
Introduction

The compounds used in this study are -

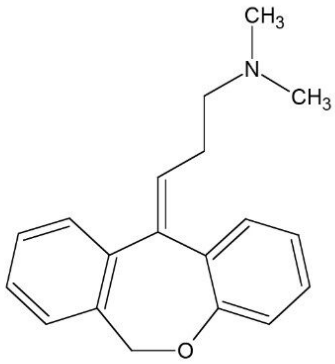
1. Trimipramine
2. Triprolidine
3. Doxepin
4. Desipramine
5. Amitriptyline



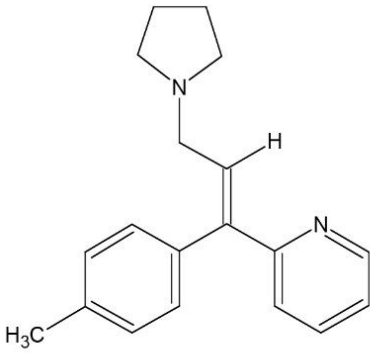
Desipramine



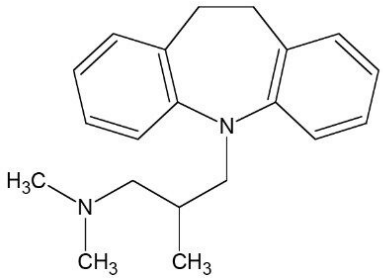
Amitriptyline



Doxepin



Triprolidine



Trimipramine

Experimental

HPLC Conditions

Column:	SunFire C_8 2.1 x 20 mm *IS*, 3.5 µm
Part number:	186002697
Mobile phase A:	Water with 0.1% HCOOH
Mobile phase B:	Acetonitrile with 0.1% HCOOH
Flow rate:	0.63 mL/min
Injection volume:	2 µL
Sample concentration:	20 µg/mL in water
Temperature:	30 °C
Detection:	Waters Micromass ZQ
Instrument:	Alliance 2796 with 2487 Dual Wavelength Detector

Gradient

Time (min)	Profile	
	%A	%B
0.0	95	5
4.0	80	20
5.0	80	20
5.1	95	5
8.0	95	5

MS Conditions

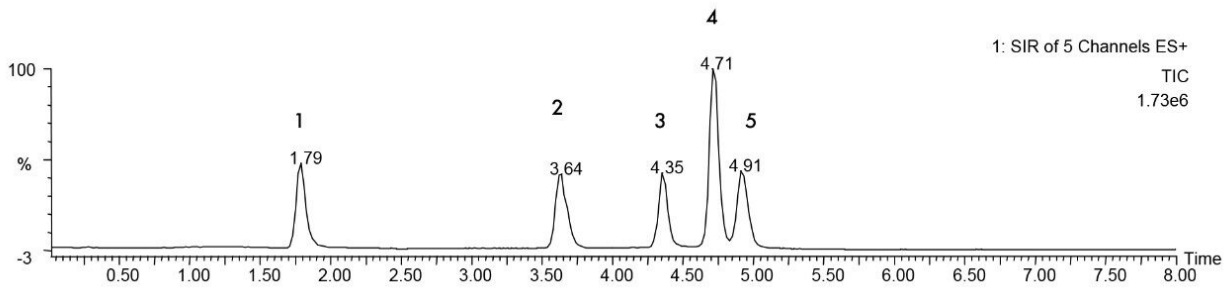
ESI+ capillary (kV):	3
Cone voltage (V):	30
Extractor (V):	3
RF lens (V):	0.3
Source temp. (°C):	150
Desolvation temp. (°C):	350
Cone gas flow (L/hr):	50

Desolvation flow (L/hr): 550

SIR

m/z	Dwell	Cone
207.86	0.2	30
280.01	0.2	30
267.03	0.2	30
278.00	0.2	30
295.07	0.2	30

Results and Discussion



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