

LC-MS/MS Analysis of 58 Antipsychotics and Antidepressants in Human Urine

- Fast analysis, 5.5-min total LC cycle time
- Good chromatographic separation of isobaric compounds
- Optimized method suitable for quantitative analysis



RAPTOR BIPHENYL PRODUCTS	
PART NO	DESCRIPTION
RTK-9309A5E	2.7 μm, 3.0 x 50 mm, ea
RTK-25808	EXP Guard cartridge holder, includes fitting & ferrules
RTK-9309A0253	2.7 μm, EXP Guard, 3.0 x 5mm, 3/pk



Analysis of 58 Antipsychotics and Antidepressants in Fortified Human Urine (2,500 ng/mL)

Column: Raptor Biphenyl 2.7 μm, (RTK-9309A5E)
50 mm x 3.0 mm

Guard Column: Raptor Biphenyl 2.7 μm, (RTK-9309A0253)
5 mm x 3.0 mm

Gradient: 60% B, 0.00 min;
60% B, 0.20 min;
100% B, 3.50 min;
60% B, 3.51 min;
60% B, 5.50 min

Mobile Phase: A: Water, 0.1% formic acid + 5mM ammonium formate
B: Methanol, 0.1% formic acid + 5mM ammonium formate

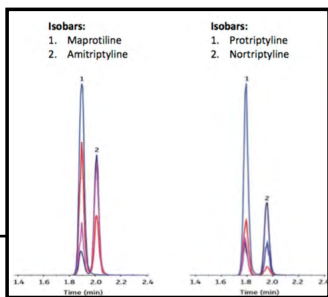
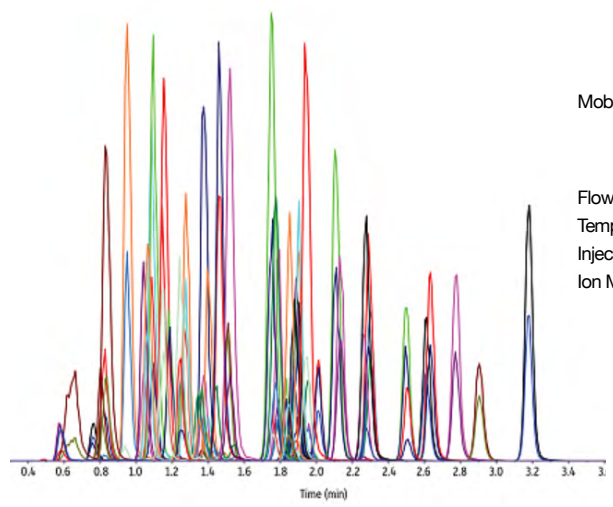
Flow Rate: 0.6 mL/min

Temp: 30 °C

Injection Vol: 2 μL

Ion Mode: Scheduled MRM in positive ESI

1. Desmethyloanzapine
2. Phenelzine sulfate
3. Olanzapine
4. Lamotragine
5. Molindone
6. (+/-)-Hydroxybupropion
7. 7-Hydroxyquetiapine
8. Bupropion-D9 (IS)
9. Bupropion
10. Venlafaxine
11. Reduced haloperidol
12. Milnacipran
13. N-desmethyilmirtazapine
14. 9-Hydroxyrisperidone
15. Mirtazapine
16. N-desmethylozapine
17. Droperidol
18. Cozapine
19. Didesmethyl citalopram
20. N-desmethyloitalopram
21. Escitalopram
22. Fluvoxamine
23. Haloperidol
24. Norfluoxetine
25. Isocarboxazid
26. Fluoxetine
27. Desmethyldoxepin
28. Doxepin
29. Trazodone
30. Oxcarbazepine
31. Risperidone
32. Quetiapine
33. Asenapine
34. Ziprasidone
35. Protriptyline
36. Desipramine
37. Paroxetine
38. Iloperidone
39. Duloxetine
40. Amoxapine
41. Carbamazepine
42. Maprotiline
43. Imipramine
44. Nortriptyline
45. Loxapine
46. Amitriptyline
47. Trimipramine
48. Pimozide
49. Chlorpromazine
50. Dehydro aripiprazole
51. Clomipramine
52. Sertraline
53. Fluphenazine
54. Aripiprazole
55. Perphenazine
56. Trifluoperazine
57. Prochlorperazine
58. Thiothixene
59. Thioridazine

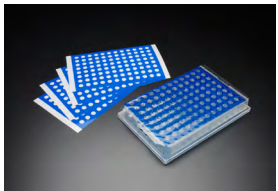


It was demonstrated that simultaneous measurement of 58 antipsychotic and antidepressant drugs and their metabolites in urine can be achieved with a fast 5.5-minute LC-MS/MS analysis using the Raptor Biphenyl column. The established method provides high-throughput and accurate determination for a variety of available mental health drugs.

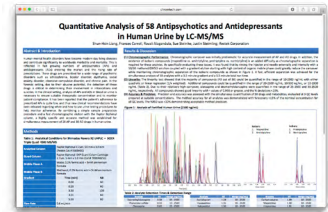
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www.chromtech.com/customcontent/CT-LC46.pdf
Visit this link to view the full scientific poster of this analysis.