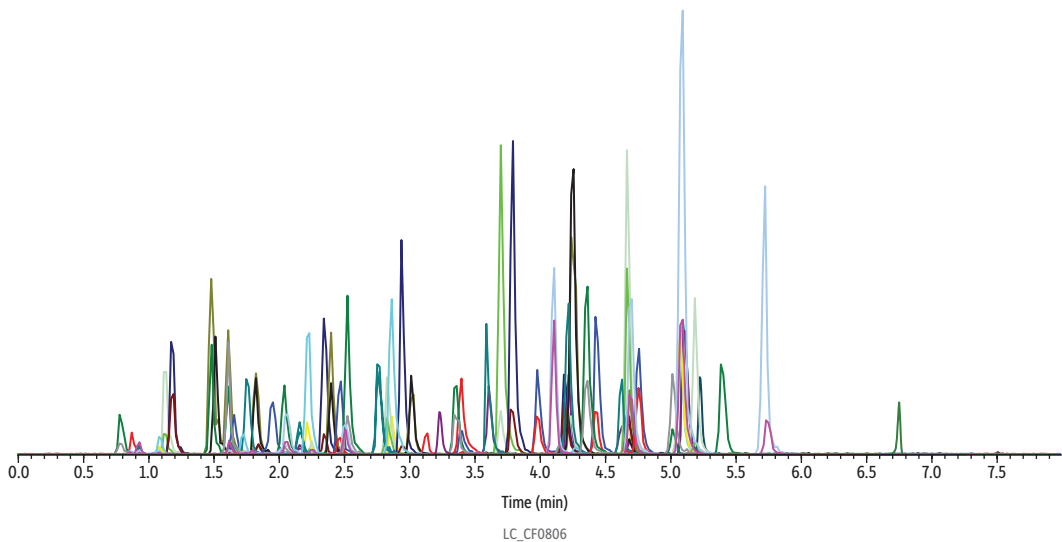


Analysis of Drugs of Abuse in Urine on Raptor Biphenyl



Peaks	tr (min)	Conc. (ng/mL)	Precursor Ion	Product Ion 1	Product Ion 2	Polarity	Peaks	tr (min)	Conc. (ng/mL)	Precursor Ion	Product Ion 1	Product Ion 2	Polarity
1. Cotinine	0.78	800	177.1	80.0	98.1	+	36. Phenobarbital	3.23	800	230.8	187.8	85.0	-
2. Morphine	0.85	400	286.2	152.1	165.0	+	37. Venlafaxine	3.35	400	278.4	260.4	195.1	+
3. Pregabalin	0.88	2000	160.2	142.1	55.0	+	38. Mirtazapine	3.39	400	266.1	72.1	195.1	+
4. Oxymorphone	0.92	400	302.1	227.2	198.2	+	39. Butalbital	3.47	800	222.9	180.0	84.9	-
5. Hydromorphone	1.08	400	286.2	184.9	156.9	+	40. Norbuprenorphine	3.51	80	414.3	152.2	165.2	+
6. Amphetamine	1.13	400	136.2	91.0	65.1	+	41. LSD	3.61	80	324.2	223.1	208.0	+
7. Gabapentin	1.18	2000	172.2	154.0	137.1	+	42. 7-Hydroxymirtazapine	3.65	80	415.5	190.1	174.9	+
8. Methamphetamine	1.48	800	150.2	91.1	119.0	+	43. 9-Hydroxyrisperidone	3.77	400	427.2	110.2	207.1	+
9. Phentermine	1.62	800	150.2	91.1	133.1	+	44. Acetyl fentanyl	3.79	40	323.2	188.0	105.0	+
10. Noroxycodone	1.62	400	302.1	227.0	197.9	+	45. Citalopram	3.94	400	325.1	109.1	262.0	+
11. Naloxone	1.65	160	328.3	310.1	212.3	+	46. Desmethyldoxepin	3.99	400	266.1	107.1	115.0	+
12. Norhydrocodone	1.73	400	286.1	199.0	128.2	+	47. Trazodone	4.10	400	372.3	148.0	260.4	+
13. O-Desmethyltramadol	1.75	400	250.1	58.0	42.0	+	48. Dextromethorphan	4.18	400	272.1	215.1	170.9	+
14. Codeine	1.80	400	300.2	152.0	165.1	+	49. Haloperidol	4.18	400	377.2	170.9	123.0	+
15. MDMA	1.82	400	194.1	163.0	135.1	+	50. Fentanyl	4.20	40	337.2	188.0	105.1	+
16. 6-Acetylmorphine	1.84	80	328.2	211.0	165.0	+	51. Norflouxetine	4.23	400	296.3	134.3	104.9	+
17. Oxycodone	1.95	400	316.2	298.0	169.0	+	52. PCP	4.25	200	244.1	86.1	159.1	+
18. Naltrexone	2.04	400	342.2	324.0	267.0	+	53. Buprenorphine	4.27	40	468.3	55.1	414.2	+
19. Hydrocodone	2.06	400	300.2	199.0	128.0	+	54. Carisoprodol	4.43	400	261.1	176.0	62.0	+
20. O-desmethylvenlafaxine	2.16	400	164.1	58.1	107.0	+	55. EDDP	4.64	400	278.1	234.3	249.2	+
21. 6-β-Naltrexol	2.21	40	344.2	326.1	308.1	+	56. Duloxetine	4.65	400	298.1	154.1	188.2	+
22. Lamotrigine	2.24	400	255.9	211.1	145.0	+	57. Paroxetine	4.65	400	330.1	192.2	70.1	+
23. Ritalinic acid	2.34	400	220.1	84.1	56.2	+	58. Nortriptyline	4.67	400	264.1	91.1	115.2	+
24. N-Desmethyltapentadol	2.40	400	208.1	121.2	107.1	+	59. Cyclobenzaprine	4.67	400	276.2	215.0	189.0	+
25. Norketamine	2.46	400	224.1	125.0	89.1	+	60. Sufentanil	4.70	40	387.2	238.1	111.1	+
26. Hydroxybupropion	2.50	400	256.0	130.2	166.0	+	61. Amitriptyline	4.82	400	278.1	91.1	202.1	+
27. Norfentanyl	2.53	80	233.1	84.1	55.0	+	62. Nersertraline HCl	5.02	400	292.0	275.0	159.0	+
28. 7-Hydroxyquetiapine	2.71	400	400.2	269.0	208.0	+	63. Lorazepam	5.02	400	321.1	229.0	275.0	+
29. Tramadol	2.76	400	264.2	58.0	77.1	+	64. Methadone	5.08	400	310.2	264.9	105.1	+
30. Xylazine	2.84	400	221.9	90.1	71.9	+	65. Oxazepam	5.08	400	287.1	268.8	241.2	+
31. Zolpidem Phenyl-4-carboxylic acid	2.84	400	338.1	265.1	219.0	+	66. Dehydro aripiprazole	5.18	400	446.2	285.0	98.1	+
32. Benzoylcegonine	2.85	200	290.1	168.1	77.1	+	67. alpha-Hydroxyalprazolam	5.33	400	325.1	297.0	216.2	+
33. Normeperidine	2.94	400	234.1	160.2	91.0	+	68. Nordiazepam	5.40	400	271.0	139.9	208.0	+
34. Meprobamate	3.01	400	219.1	158.2	97.0	+	69. Temazepam	5.71	400	301.1	255.1	282.9	+
35. 7-Aminoclonazepam	3.07	400	286.1	121.2	250.1	+	70. THC-COOH	6.73	200	343.0	298.9	244.8	-

Column	Raptor Biphenyl (cat.# 9309A52)			
Dimensions:	50 mm x 2.1 mm ID			
Particle Size:	2.7 µm			
Pore Size:	90 Å			
Guard Column:	Raptor Biphenyl EXP guard column cartridge 5 mm, 2.1 mm ID, 2.7 µm (cat.# 9309A0252)			
Temp.:	45 °C			
Standard/Sample				
Diluent:	90:10 Water, 0.1% formic acid:methanol, 0.1% formic acid			
Inj. Vol.:	2 µL			
Mobile Phase				
A:	Water, 0.1% formic acid			
B:	Methanol, 0.1% formic acid			
Time (min)	Flow (mL/min)	%A	%B	
0.00	0.6	90	10	
6.00	0.6	25	75	
7.00	0.6	0	100	
7.01	0.6	90	10	
8.00	0.6	90	10	

Detector	SCIEX Triple Quad 4500		
Ion Source:	Electrospray		
Ion Mode:	ESI+/ESI-		
Instrument	Shimadzu Nexera X2		
Sample Preparation	20 µL of a calibrator control in urine was added to a 1.5 mL microcentrifuge tube along with 20 µL of a premade enzyme hydrolysis master mix. The sample was vortexed for 10 seconds and left to incubate at room temperature for 20 minutes. After the incubation, 260 µL of the diluent [water, 0.1 % formic acid: methanol, 0.1 % formic acid 90:10 (v:v)] was added. The sample was vortexed for 10 seconds and centrifuged for 10 minutes at 3700 rpm. One hundred microliters was added to a vial insert (cat.# 21776) in a 2.0 mL, amber, short-cap vial (cat.# 21142) and capped with a 9 mm short cap (cat.# 24497) and injected on the LC-MS/MS for analysis.		