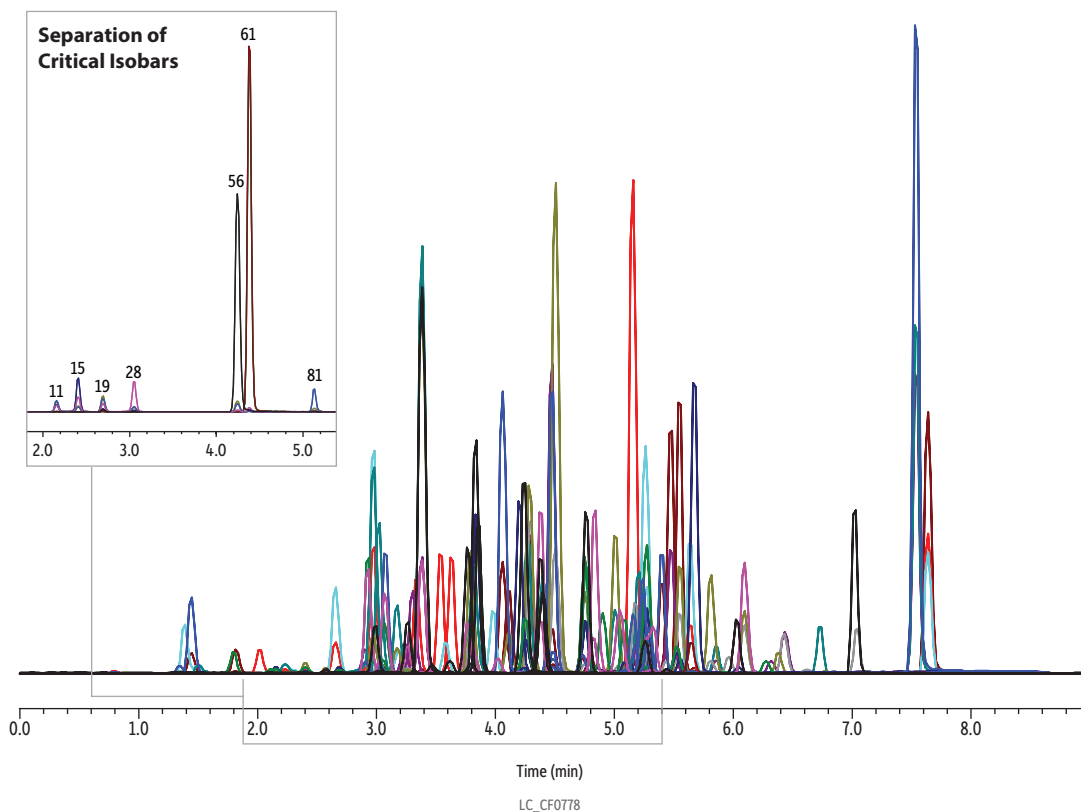


Drug and Drug Metabolites on Force Biphenyl by LC-MS/MS



Column Force Biphenyl (cat.# 962935E)
Dimensions: 50 mm x 3.0 mm ID
Particle Size: 3 µm
Pore Size: 100 Å
Guard Column: Force Biphenyl EXP guard column cartridge 5 mm, 3 mm ID, 5 µm (cat.# 962950253)
Temp.: 30 °C
Standard/Sample
Diluent: Water
Conc.: 80 ng/mL
Inj. Vol.: 1 µL
Mobile Phase
A: Water, 0.1% formic acid
B: Methanol, 0.1% formic acid

Time (min)	Flow (mL/min)	%A	%B
0.00	0.8	96	4
7.00	0.8	0	100
8.00	0.8	0	100
8.01	0.8	96	4
10.00	0.8	96	4

Detector MS/MS
Ion Source: Electrospray
Ion Mode: ESI+
Instrument UHPLC
Sample Preparation Standards were prepared in a 2 mL screw-thread vial (cat.# 21143) and capped with a short-cap, screw-vial closure (cat.#24498).
Notes The analytical and guard columns were equipped with an UltraShield precolumn filter (cat. 25809).

Peaks	tr (min)	Precursor Ion	Product Ion	Product Ion	Peaks	tr (min)	Precursor Ion	Product Ion	Product Ion
1. Norcotinine	1.35	163.1	80.1	118.0	65. Paliperidone	4.51	427.4	207.2	110.1
2. Nicotine	1.39	163.2	130.1	117.1	66. loperidone	4.51	427.1	207.2	110.2
3. BZP	1.44	177.2	91.1	65.1	67. 9-Hydroxyrisperidone	4.51	427.0	207.2	110.2
4. Anabasine	1.51	163.2	92.1	120.1	68. Didemethylcitalopram	4.73	297.1	109.2	262.1
5. Normorphine	1.56	272.3	165.1	152.0	69. Citalopram	4.75	325.2	109.2	262.1
6. Noroxymorphone	1.80	288.2	270.2	213.2	70. Escitalopram	4.75	325.3	109.2	262.1
7. Lisdexamfetamine	2.62	264.2	84.2	91.2	71. Topiramate	4.76	340.0	264.1	224.0
8. Cotinine	2.02	177.2	80.1	98.1	72. Diphenhydramine	4.76	256.2	152.1	152.1
9. Psilocybin	2.04	285.3	205.2	58.3	73. Haloperidol	4.80	377.2	123.1	95.0
10. Dihydromorphine	2.11	288.3	157.1	185.0	74. Desmethyldoxepin	4.82	266.1	115.0	107.2
11. Morphine	2.16	286.2	152.1	165.1	75. Ezogabine	4.84	304.1	109.2	230.1
12. Morphine-6-β-D-glucuronide	2.22	462.3	286.2	201.1	76. Fluoxetine	4.91	310.1	44.1	148.0
13. Oxymorphone	2.23	302.2	227.1	198.1	77. Dextromethorphan	5.01	272.2	215.2	171.1
14. Morphine-N-oxide	2.31	302.3	285.2	162.1	78. Chlordiazepoxide	5.05	300.1	227.1	282.0
15. Hydromorphone	2.41	286.2	185.1	157.2	79. Norpropoxyphene	5.08	326.4	252.2	91.0
16. Psilocin	2.42	205.2	58.3	160.1	80. Propoxyphene	5.09	340.3	58.2	266.3
17. Olanzapine	2.66	313.2	256.1	198.1	81. Asenapine	5.11	286.2	166.0	229.0
18. Methylephedrine	2.68	180.2	162.2	115.2	82. Midazolam	5.16	326.1	223.0	223.0
19. Norcodeine	2.69	286.1	152.1	115.0	83. Sufentanil	5.16	387.3	238.2	111.1
20. Naloxone	2.90	328.3	271.1	310.1	84. Protriptyline	5.18	264.1	191.1	165.0
21. Methamphetamine	2.93	150.3	91.1	119.2	85. Promazine	5.19	285.1	86.2	58.2
22. Noroxycodone	2.98	302.1	284.2	227.1	86. Amoxapine	5.21	314.2	271.1	193.1
23. Dihydrocodeine	2.98	302.2	199.2	128.0	87. Oxcarbazepine	5.22	253.1	180.1	208.1
24. MDA	2.98	180.2	163.1	105.2	88. Paroxetine	5.23	330.2	192.2	70.2
25. Codeine	3.02	300.2	152.0	165.0	89. Phenytoin	5.24	253.0	182.2	104.2
26. O-Desmethyltramadol	3.02	250.1	44.0	232.0	90. Loxapine	5.25	328.2	271.1	193.1
27. 6-Acetylmorphine	3.04	328.2	165.1	211.2	91. Maprotiline	5.26	278.1	250.3	191.1
28. Norhydrocodone	3.05	286.2	199.1	128.2	92. Cyclobenzaprine	5.26	276.2	215.1	189.0
29. Phentermine	3.07	150.3	91.1	133.2	93. Amitriptyline	5.27	278.2	202.1	91.2
30. Methylone	3.07	208.1	160.2	132.2	94. EDDP	5.27	278.2	234.1	249.2
31. Desomorphine	3.18	272.1	165.0	152.2	95. Venlafaxine	5.27	278.4	260.2	121.2
32. Oxycodone	3.19	316.2	298.2	169.0	96. Nortriptyline	5.29	264.1	91.0	115.0
33. Naltrexone	3.24	342.2	324.3	267.2	97. Tenoxicam	5.32	338.1	121.2	95.0
34. Hydrocodone	3.27	300.2	199.2	128.2	98. Trimipramine	5.40	295.2	100.2	58.3
35. Levamisole	3.31	205.1	178.1	91.2	99. Pimozide	5.43	462.1	109.2	328.2
36. 7-Aminonitrazepam	3.34	252.2	121.1	94.2	100. Mesoridazine	5.44	387.3	126.1	98.2
37. O-Desmethylvenlafaxine	3.38	264.2	58.2	107.0	101. α-Hydroxymidazolam	5.48	342.2	203.1	203.1
38. MDEA	3.54	208.2	163.2	105.2	102. Clomipramine	5.53	315.3	86.2	58.2
39. m-Hydroxybenzoylcegonine	3.59	306.2	168.2	121.1	103. Methadone	5.55	310.2	265.2	105.2
40. Lamotrigine	3.62	256.1	210.9	145.0	104. Sertraline	5.56	306.1	158.9	275.1
41. N-Desmethyltapentadol	3.63	208.1	107.2	121.2	105. Metaxalone	5.61	222.1	161.2	77.1
42. Tapentadol	3.76	222.2	107.2	121.2	106. Eslicarbazepine	5.65	297.2	194.2	237.1
43. Hydroxybupropion	3.80	256.0	166.0	130.2	107. EMDP	5.68	264.2	220.1	235.2
44. Molindone	3.81	278.1	100.1	70.1	108. N-Desmethylflunitrazepam	5.82	300.1	254.1	198.1
45. Zolpidem Phenyl-4-carboxylic acid	3.82	338.2	265.1	219.0	109. Ketorolac	5.89	256.1	105.2	77.1
46. Dextrorphan	3.84	258.2	157.1	201.2	110. Etoricoxib	5.95	359.2	280.1	279.1
47. Levorphanol	3.84	258.2	157.2	199.2	111. Clonazepam	5.97	316.1	270.1	214.1
48. Tramadol	3.86	264.2	58.2	77.0	112. Tolmetin	6.03	258.1	119.2	91.1
49. N-Desmethyltramadol	3.98	250.2	44.1	232.1	113. Thioridazine	6.03	371.3	126.3	98.2
50. Methylphenidate	4.00	234.4	84.2	56.1	114. α-Hydroxytriazolam	6.04	359.2	331.1	176.0
51. Lacosamide	4.03	251.5	91.2	108.2	115. Methaqualone	6.10	251.1	132.1	91.2
52. Normeperidine	4.06	234.1	160.2	91.0	116. α-Hydroxylprazolam	6.17	325.2	297.1	216.2
53. Benzoylcegonine	4.11	290.2	168.2	77.2	117. Clobazam	6.28	301.0	259.1	224.1
54. Remifentanil	4.13	377.4	113.2	317.2	118. Parecoxib	6.32	371.2	234.1	165.0
55. Cocaine	4.20	304.2	182.2	77.1	119. Zaleplon	6.32	306.2	236.1	264.2
56. 7-Aminoclonazepam	4.24	286.1	121.2	250.1	120. Flunitrazepam	6.39	314.2	268.1	239.1
57. N-Desmethyldiazepam	4.25	313.0	192.1	270.1	121. Temazepam	6.43	301.1	255.2	283.1
58. N-Desmethyilmirtazapine	4.27	252.1	195.2	209.2	122. Estazolam	6.44	295.1	267.1	205.1
59. Norcocaine	4.29	290.1	168.2	136.2	123. Diazepam	6.74	285.1	193.1	154.2
60. MDPV	4.29	276.2	126.3	135.2	124. XLR-11	7.02	330.3	125.1	144.1
61. Pentazocine	4.38	286.2	218.2	69.1	125. Prazepam	7.04	325.2	271.2	140.1
62. Mirtazapine	4.40	266.1	195.2	107.2	126. THC	7.15	315.2	193.0	123.1
63. Butorphanol	4.47	328.3	310.2	131.0	127. JWH-073	7.54	328.2	127.1	155.1
64. Clozapine	4.49	328.2	271.0	193.0	128. JWH-018	7.64	342.3	155.2	127.1