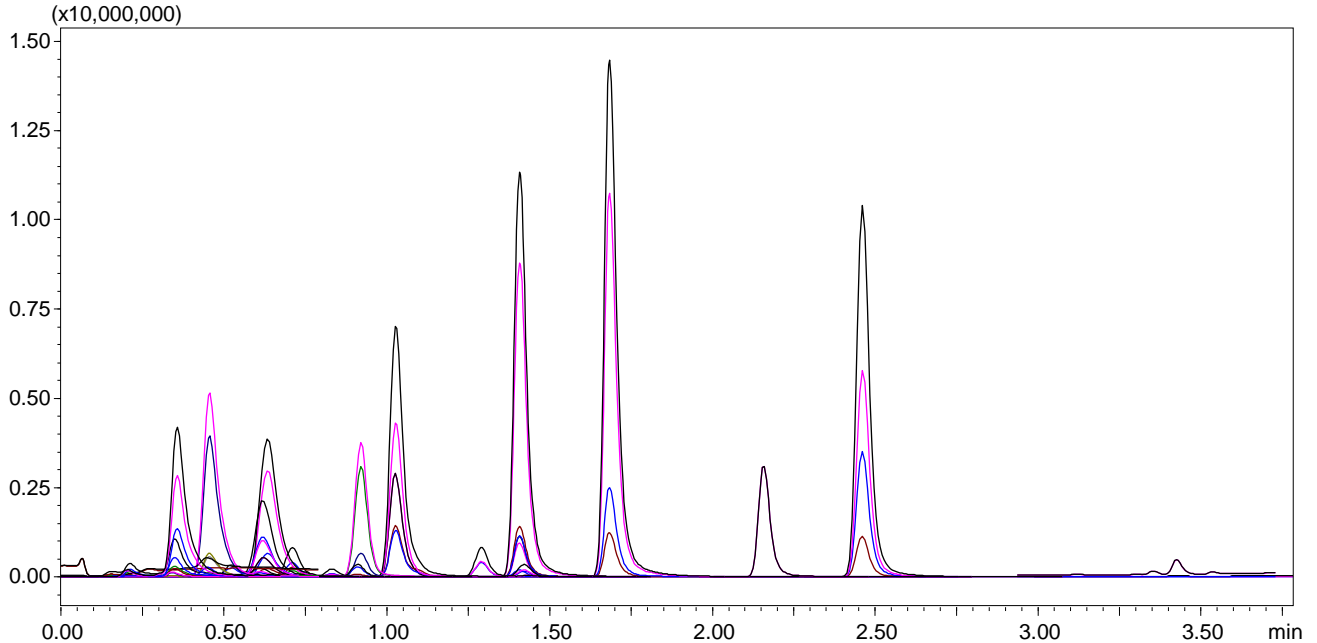


Fast LC-MS/MS Analysis of Illicit Drugs using an Avantor[®] ACE[®] HTP-MS column



Method Details

CONDITIONS

Column: Avantor® ACE® HTP-MS
 Particle Size: 2 µm
 Dimensions: 10 x 2.1 mm
 Mobile Phases: A: 0.1% formic acid in H₂O
 B: 0.1% formic acid in MeOH:MeCN (1:1 v/v)

Time (mins)	% B
0	10
0.2	10
3	60
3.01	100
4	100
4.01	10
6.5	10

Flow Rate: 0.5 mL/min
 Temperature: Ambient
 Injection Volume: 10 µL
 Detection: Shimadzu LCMS 8060
 Ionisation mode: +/- switching; Nebulising gas flow: 2 L/min; Heating gas flow: 15 L/min;
 Interface temperature: 400 °C; DL temperature: 250 °C; Heat block temperature: 400 °C;
 Drying gas flow: 3 L/min
 Sample: 5,000 ng/L standard Mix in ultrapure water

MRM TRANSITIONS

Analyte	MRM	MS Parameters					Retention Time Window Range (min)	
		Polarity	Q1 Pre Bias (V)	Collision energy (V)	Q3 Pre Bias(V)			
6-Acetylcodeine	342.00 → 301.20	+	-18	-12	-20	2.936	3.736	
	342.00 → 225.15	+	-18	-28	-14			
Amphetamine	136.00 → 90.85	+	-20	-15	-20	0	0.679	
	136.00 → 118.95	+	-19	-13	-12			
	136.00 → 65.00	+	-18	-37	-26			
Amphetamine-d6	142.20 → 93.20	+	-17	-19	-17	0	0.679	
	142.20 → 125.20	+	-16	-14	-21			
Benzocaine	165.90 → 77.00	+	-10	-26	-15	0.972	1.772	
	165.90 → 94.10	+	-10	-19	-19			
Benzoylecgonine, BZE	289.95 → 168.00	+	-20	-20	-20	0.571	1.371	
	289.95 → 76.90	+	-17	-54	-15			
	289.95 → 168.0	+	-18	-31	-21			
Benzoylecgonine, BZE-d3	293.10 → 171.15	+	-30	-20	-18	0.574	1.374	
Cocaethylene	318.20 → 196.00	+	-20	-20	-20	1.241	2.041	
	318.20 → 82.15	+	-19	-30	-20			
	318.20 → 150.20	+	-12	-26	-15			
Cocaine	304.05 → 181.90	+	-20	-20	-20	1.001	1.801	
	304.05 → 76.90	+	-20	-50	-20			
	304.05 → 81.95	+	-20	-30	-20			
Cocaine-d3	307.10 → 185.2	+	-22	-21	-19	1.014	1.814	
	307.10 → 77.20	+	-15	-54	-14			
EDDP	279.00 → 235.10	+	-14	-32	-15	1.683	2.483	
Ketamine	238.10 → 125.00	+	-12	-26	-26	0.466	1.266	
	238.10 → 207.00	+	-12	-15	-15			
Ketamine-d4	242.10 → 129.20	+	-25	-28	-26	0.466	1.266	
	242.10 → 211.25	+	-28	-15	-10			
Lidocaine	235.00 → 85.90	+	-20	-20	-20	0.199	0.999	
	235.00 → 57.95	+	-13	-35	-20			
	235.00 → 29.95	+	-14	-51	-11			
Lidocaine-d10	245.20 → 96.30	+	-29	-22	-17	0.124	0.924	
6-MAM	328.00 → 164.90	+	-20	-38	-17	0.218	1.018	
	328.00 → 210.85	+	-20	-26	-22			
	328.00 → 192.85	+	-20	-28	-20			
6-MAM-d6	334.00 → 165.00	+	-17	-40	-30	0.218	1.018	
	334.00 → 210.95	+	-10	-28	-15			
MDMA	194.10 → 163.05	+	-10	-13	-12	0.122	0.922	
	194.10 → 105.10	+	-10	-25	-22			
MDMA-d5	199.10 → 165.25	+	-22	-14	-29	0.118	0.918	
	199.10 → 107.20	+	-10	-25	-11			
Methadone	310.35 → 265.00	+	-20	-15	-20	2.002	2.802	
	310.35 → 105.00	+	-20	-35	-20			
	310.35 → 57.25	+	-11	-24	-23			

MRM TRANSITIONS

Analyte	MRM	MS Parameters					Retention Time Window Range (min)	
		Polarity	Q1 Pre Bias (V)	Collision energy (V)	Q3 Pre Bias(V)			
Methamphetamine	150.00 → 91.05	+	-10	-19	-18	0	0.798	
	150.00 → 65.00	+	-22	-40	-20			
	150.00 → 118.95	+	-20	-14	-20			
Methamphetamine d5	155.15 → 92.10	+	-16	-22	-16	0	0.798	
	155.15 → 92.10	+	-16	-12	-21			
	155.15 → 92.10	+	-18	-15	-25			
Morphine	286.15 → 165.10	+	-14	-44	-12	2.281	3.081	
	286.15 → 153.10	+	-14	-45	-29			
Morphine-d3	289.00 → 152.15	+	-14	-55	-30	1.960	2.760	
	289.00 → 201.15	+	-14	-27	-21			
Norketamine	224.90 → 208.25	+	-27	-12	-22	0.404	1.204	
	224.90 → 126.20	+	-11	-25	-24			
	224.90 → 125.15	+	-11	-24	-12			
Phenacetin	180.00 → 65.00	+	-23	-39	-25	0.834	1.634	
	180.00 → 137.90	+	-12	-19	-14			
Procaine	237.20 → 119.90	+	-20	-25	-20	0	0.577	
	237.20 → 163.85	+	-20	-16	-20			

ORDERING TABLE

Product	Details	Size	Part Number
Avantor® ACE® HTP-MS Starter Kit	Fast Analysis LC-MS column (Holder & Cart)	10 x 2.1 mm	ACE-HTP-SK1

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