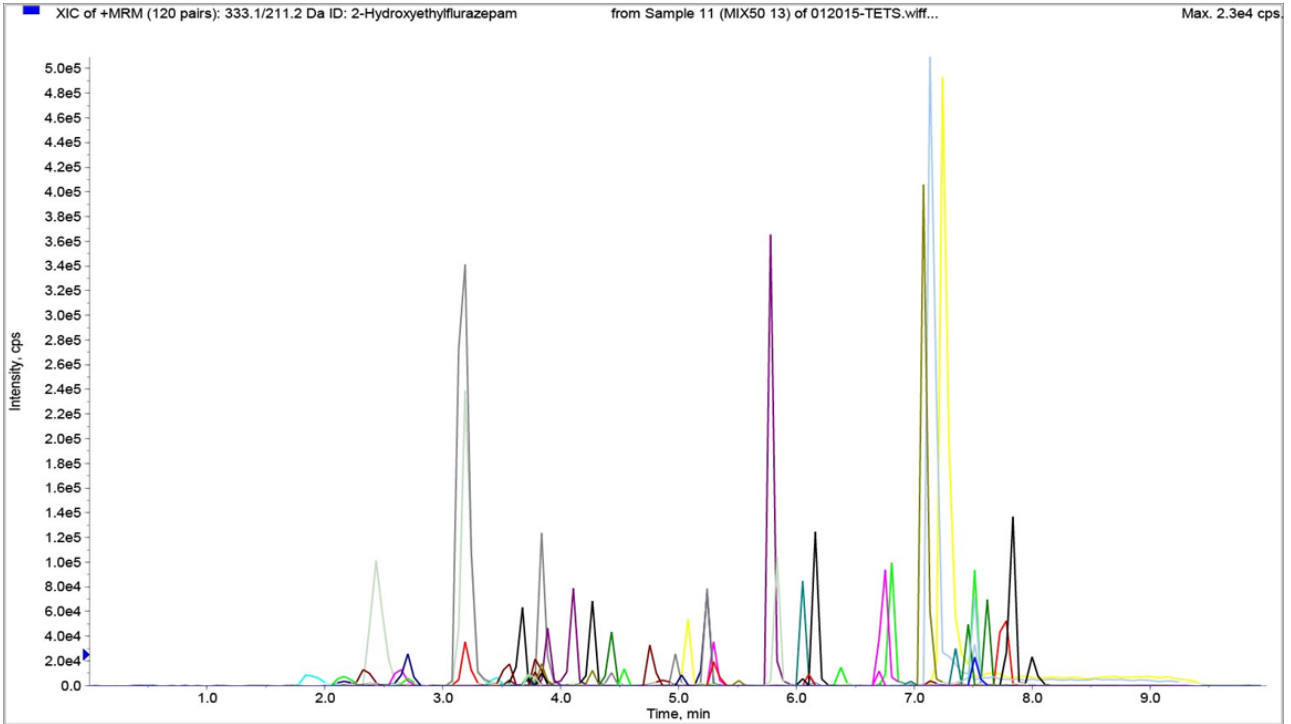




# 121 ACIDIC, NEUTRAL AND BASIC DRUG ANALYTES BY LC-MS/MS



## LC-MS/MS CONDITIONS:

**Instrument:** Shimadzu HPLC 20-AD

**Detector:** AB Sciex API 3200 Qtrap MS/MS

**LC Column:** UCT Selectra® DA HPLC Column 50 x 2.1mm, 5 µm

**Polarity:** ESI +

**Mobile Phase A:** 0.1% Formic Acid in D.I. H<sub>2</sub>O

**Mobile Phase B:** 0.1% Formic Acid in Methanol

**Flow Rate:** 0.6 mL/minute

**Injection Volume:** 20 µL

**Gradient:**

Time	%A	%B
0.00	90	10
0.50	90	100
4.00	60	40
7.50	15	85
8.50	10	90
8.51	90	10
10.00	STOP	

ANALYTE	Relative Retention Time (min)	Q1	Q3
Ecgoninemethylester	0.5	200.1	182.1
Phenylpropanolamine	0.9	152.2	134.2
Morphine	1.4	286	152
Oxymorphone	1.5	302	227
Pregabalin	1.5	160.2	97
Pseudoephedrine	1.9	166.1	148.1
Hydromorphone	1.9	286	185
Ephedrine	1.9	166.2	148.3
Amphetamine	2	136.1	91.1
Acetaminophen	2	152	110
Gabapentin	2.2	172.1	67.1
3,4-Methylenedioxyamphetamine	2.5	180.1	105
Atropine	2.5	290.2	124.1
Buspirone	2.5	386.2	122.1
Clonidine	2.5	230	213
Methamphetamine	2.5	150.1	91.1
Nicotine	2.5	163.1	132.1
Phenylephrine	2.5	168.1	91.1
Theobromine	2.5	181.1	138
Theophylline	2.5	181.1	124
Mephedrone	2.5	178.2	160.1
Phentermine	2.5	150.2	91.2
6-O-Monoacetylmorphine	2.6	328.1	165.1
Naloxone	2.8	328.2	310.2
Methylone	2.8	208	160.1
Phenmetrazine	2.8	178.2	115.1
Phendimetrazine	2.8	192.2	147.1
Caffeine	3	195.1	122.9
Dihydrocodeine	3	302.2	199.1
Codeine	3	300	152
Desmethyltramadol	3	250.2	58.2
3,4-Methylenedioxymethamphetamine	3.1	194.1	105.1
7-Aminonitrazepam	3.1	252.1	121.1
Oxycodone D6	3.1	322.3	304.1
Oxycodone	3.2	316.1	298.1
Hydrocodone	3.4	300	199
Diethylpropion	3.4	206.2	100.2
3,4-Methylenedioxyethylamphetamine	3.6	208.1	77.1
Naltrexol	3.6	344.3	308.4

ANALYTE	Relative Retention Time (min)	Q1	Q3
Pheniramine	3.8	241.2	167.2
Olanzapine	4	313.1	256.1
Norketamine	4	224.1	207.1
Methylphenidate	4.1	234.1	84.1
Norfentanyl	4.1	233.2	84.1
Doxylamine	4.1	271.3	167.2
Nalbuphine	4.1	358.4	185.2
Tramadol	4.3	264.2	58
Tapentadol	4.3	222.3	107.2
Benzoyllecgonine	4.4	290.1	168.1
7-Aminoclonazepam	4.5	286.1	121.1
Ketamine	4.5	238.1	125
Meperidine	4.5	248.2	220
Meprobamate	4.6	219.1	158.2
Normeperidine	4.7	234.1	91.2
Cocaine	4.9	304.1	182.1
MDPV	5	276.2	126.2
Midazolam	5	326.1	291.3
Bupropion	5	240.2	184
alpha-pyrrolidinopentophenone	5	272.3	110.1
5-methoxy DALT	5	272.3	110
7-Aminoflunitrazepam	5.2	284.1	135.1
Chlorpheniramine	5.2	275.1	230.1
Venlafaxine	5.2	278.2	260.2
Mirtazapine	5.3	266.2	195.1
Pentazocine	5.3	286.3	175.1
Norbuprenorphine	5.4	414.2	187.1
Butorphanol	5.4	328.4	131.2
Brompheniramine	5.5	319.1	274.1
Clozapine	5.5	327.1	270.1
Zolpidem	5.6	308.2	235.2
Diphenhydramine	5.8	256.2	165.1
Buprenorphine	5.8	468.2	396.2
Citalopram	5.9	325.2	109
D3-Doxepin	5.9	283	107.1
Trazodone	5.9	372.2	176.1
Doxepin	6	280.2	107.1
Fentanyl	6	337.2	188.2
Fluoxetine	6	310.1	117.1
Haloperidol	6	376.1	123

ANALYTE	Relative Retention Time (min)	Q1	Q3
Clomipramine	6	315.2	86.1
Phencyclidine-D5	6	249.2	164.2
Dextromethorphan	6.1	272.2	171.2
Mianserin	6.1	265.2	208.2
Phencyclidine	6.1	244.2	86.1
Carisoprodol	6.1	261.2	176.1
Quetiapine	6.2	384.2	253.1
Zopiclone	6.2	389.1	245
Dextropropoxyphene	6.3	340.2	266.2
Propoxyphene	6.3	340	58
alpha-hydroxymidazolam	6.3	342.1	168.1
Desipramine	6.4	267.2	72.1
Imipramine	6.4	281.2	86.1
EDDP	6.4	278.2	234.1
Cyclobenzaprine	6.4	276.2	215
Bromazepam	6.5	316	182.1
Nortriptyline	6.5	264.2	233.1
Paroxetine	6.5	330.1	192.1
Carbamazepine	6.5	237.1	194.2
Amitriptyline	6.6	278.2	233.2
Lorazepam	6.8	321	229.1
Methadone	6.8	310.2	265.2
Clonazepam	6.9	316.1	270.1
Desalkylflurazepam	6.9	289	140.1
Oxazepam	6.9	287.1	241.1
alpha-Hydroxytriazolam	6.9	359	331.1
2-Hydroxyethylflurazepam	7	333.1	211.2
Chlordiazepoxide	7	300.1	227.1
Triazolam	7	343	239
alpha-Hydroxyalprazolam	7	325.1	297.2
Norfluoxetine	7	296.2	134.2
Nordiazepam	7.2	271.1	140.1
Sertraline	7.2	306.1	159
Estazolam	7.3	295.1	205.2
Flunitrazepam	7.3	314.1	268.1
Alprazolam-D5	7.3	314.2	286.3
Alprazolam	7.4	309.1	281.1
Temazepam	7.4	301.1	255.1
D5-Diazepam	7.5	290	198.2

ANALYTE	Relative Retention Time (min)	Q1	Q3
Diazepam	7.7	285.1	193.2
Methaqualone-d7	8	259.2	98.2
Flurazepam	8.3	388.1	315.1