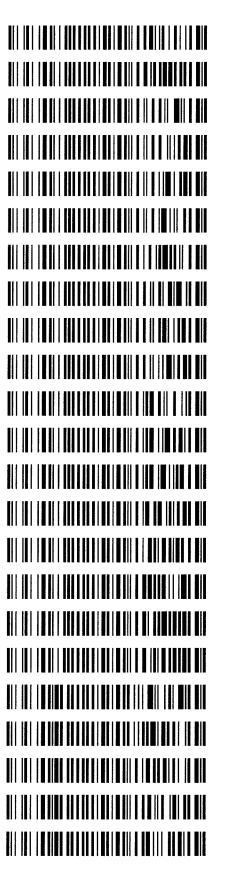
LAB_CASE C2017-0822	<u>ITEM</u> 1	<u>TASK ID</u> 83569	DESCRIPTION AM 25/AM 26 Blood MultiDrug/
C2017-0845	1	83818	AM 25/AM 26 Blood MultiDrug/
C2017-0855	1	84019	AM 25/AM 26 Blood MultiDrug/
C2017-0856	1	84021	AM 25/AM 26 Blood MultiDrug/
C2017-0857	1	84026	AM 25/AM 26 Blood MultiDrug/
C2017-0858	1	84029	AM 25/AM 26 Blood MultiDrug/
C2017-0891	1	84385	AM 25/AM 26 Blood MultiDrug/
C2017-0894	1	84489	AM 25/AM 26 Blood MultiDrug/
C2017-0895	1	84491	AM 25/AM 26 Blood MultiDrug/
C2017-0905	1	84511	AM 25/AM 26 Blood MultiDrug/
C2017-0917	1	84619	AM 25/AM 26 Blood MultiDrug/
C2017-0919	1	84624	AM 25/AM 26 Blood MultiDrug/
C2017-0920	1	84626	AM 25/AM 26 Blood MultiDrug/
C2017-0945	1	84857	AM 25/AM 26 Blood MultiDrug/
C2017-0946	1	84896	AM 25/AM 26 Blood MultiDrug/
C2017-0957	1	84938	AM 25/AM 26 Blood MultiDrug/
C2017-0994	1	85416	AM 25/AM 26 Blood MultiDrug/
C2017-0995	1	85418	AM 25/AM 26 Blood MultiDrug/
M2017-1689	1	82175	AM 25/AM 26 Blood MultiDrug/
M2017-1799	1	85289	AM 25/AM 26 Blood MultiDrug/
M2017-1841	1	84869	AM 25/AM 26 Blood MultiDrug/
M2017-1888	1	85291	AM 25/AM 26 Blood MultiDrug/
M2017-1917	1	84884	AM 25/AM 26 Blood MultiDrug/

reviewed 6/7/17

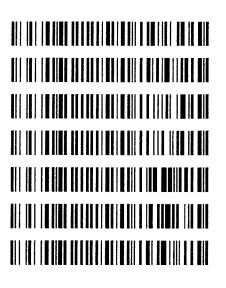
Buylee

5/30/2017



Worklist: 1734

LAB CASE	ITEM	TASK ID	DESCRIPTION
M2017-1918	1	85292	AM 25/AM 26 Blood MultiDrug/
M2017-2006	1	84881	AM 25/AM 26 Blood MultiDrug/
M2017-2047	1	85412	AM 25/AM 26 Blood MultiDrug/
M2017-2049	5	84883	AM 25/AM 26 Blood MultiDrug/
M2017-2121	2	84621	AM 25/AM 26 Blood MultiDrug/
M2017-2187	2	84894	AM 25/AM 26 Blood MultiDrug/
M2017-2344	5	85414	AM 25/AM 26 Blood MultiDrug/



5/31/2017

Worklist: 1741

Screen by L
Screen by L



Multi-Drug Screen in Blood by LC-MS/MS
Extraction Date: 5-25-17 Analyst: Anne Nord
PRE-ANALYTIC
Plate Lot# 0495940 Plate. Exp. 12/12/2017 ✓ 1. Ensure all solutions are within expiration date.
 Mobile Phase A: 10mM Amm Formate Mobile Phase B 0.1% FA in MeOH Blank/Negative Blood: Lot 321623-1 O.5M Ammonium Hydroxide Column: Phenomenex Phenyl Hexyl (4.6 x 50mm; 2.6um) Ethyl Acetate
$\sqrt{2}$ 2. Check levels of mobile phases and needle wash and refill as necessary. Ensure waste is not full.
$\overline{\checkmark}$ 3. Begin mobile phase flow and allow system to equilibrate for approx. 30 min.
4. Create worklist. Data path name: 5-25-17 blood screen AM 25-26
ANALYTIC
1. Remove standards plate, blood, and samples from cold storage. Allow to reach room temperature.
2. Pipette 250µL blood (<i>calibrated pipette</i>) in wells of analytical (standards) plate.
Blank blood for locations containing standards/QCs and internal standards
 Sample blood for locations containing only internal standards J 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. Shaker ID 66759
$\frac{\checkmark}{4}$ 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. <i>Shaker ID 66759</i> $\frac{\checkmark}{4}$ Pipette 250µL 0.5M ammonium hydroxide buffer in wells of analytical plate.
$\sqrt{5}$. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
\sim 6. Transfer 300µL of blood+base mixture to corresponding wells of SLE+ plate.
γ 7. Apply positive pressure for approx. 4 seconds (or until no liquid remains on top of sorbent).
✓ (Load at 85-100 PSI- Selector to the right) Manifold ID 66729 ✓ Wait 5 min.
8. Add 900 μ L ethyl acetate and allow to flow for 5 minutes under gravity.
 8. Add 900μL ethyl acetate and allow to flow for 5 minutes under gravity. 9. Apply positive pressure for approx. 15 seconds. (10-15 PSI- Selector to the left) 10. Add 900μL ethyl acetate and allow to flow for 5 minutes under gravity.
$- \sqrt{10}$ 10. Add 900µL ethyl acetate and allow to flow for 5 minutes under gravity.
\checkmark 11. Apply positive pressure for approx. 15 seconds. (10-15 PSI- Selector to the left)
 12. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C. SPE Dry ID 66819
13. Reconstitute in 100µL 100% MeOH and heat seal plate with foil. Place in autosampler and run worklist.
POST-ANALYTIC \checkmark 1.Open quantitation software and create a new quantitation batch. Batch name: 52517 $cann - screech$ \checkmark 2.Make any necessary integration changes. 52517 $maks$ p1
$\sqrt{1}$. Open quantitation software and create a new quantitation batch. Batch name: $\frac{5251}{caan}$ screece
$\sqrt{\frac{2}{2}}$ 2. Make any necessary integration changes. 33577 mes pro
 3. Evaluate samples, S/N of primary transition >5 and S/N of secondary transition >3 or evaluation of peak symmetry and resolution. Within +/- 2% or 0.1 min RT of administrative control. > 1/5 the response of administrative control.
4. Did all QCs pass for each analyte? Y/N
$\frac{\sqrt{2}}{\sqrt{2}}$ 4. Did all QCs pass for each analyte? $\sqrt{2}$ N $\frac{\sqrt{2}}{\sqrt{2}}$ 5. Central File Packet to include: $\sqrt{2}$ LIMS Worklist: $\sqrt{2}$ Method Checklist $\sqrt{2}$ Calibration and Control Reports
COMMENTS:

COMMENTS:

B
A

Norhydrocodone	Norter		Norfentanyl	Nordiazepam	Norbup	Naltrexone	Naltrexol	Naloxone	Morphine	Metham	Methadone	Meprobamate	Ketamine	Hydrom	Hydrocodone	Fluoxetine	Fentanyl	EDDP	Doxylamine	Diphen	Dihydrocodeine	Diazepam	Dextrorphan	Dextron	Cyclobe	Codeine	Clonazepam	Citalopram	Carisoprodo	Bupropion	Amphetamine	Alprazolam	alpha-PVP	a-hydro	Acetyl N	Acetyl Fentanyl	7-amino	6-MAM		
-		nondone	IVUE	epam	Norbuprenorphine	ne	9	õ	P	Methamphetamine	one	amate	ō	Hydromorphone	odone	ne	-		nine	Diphenhydramine	codeine	m	ohan	Dextromethorphan	Cyclobenzaprine	Ψ	pam	am	rodol	on	amine	am	<Ρ	a-hydroxyalprazolam	Acetyl Norfentanyl	entanyl	7-aminoclonazepam		Name	Compound Method
		ιV	233.2 -> 84.2	271.1 -> 140	414.3 -> 101	342.2 -> 324	344.2 -> 326	328.2 -> 309	286.2 -> 201	150.1 -> 91.1	310.2 -> 265	219.1 -> 158	238.1 -> 125	286.2 -> 184	300.2 -> 198	310.1 -> 44.3	337.2 -> 105	279.2 -> 235	271.2 -> 182	256.2 -> 167	302.2 -> 198	285.1 -> 193	258.2 -> 157	V	*	2	\$	325.2 -> 109	261.2 -> 176	240.1 -> 184	136.1 -> 91.1	309.1 -> 281	232.2 -> 91.0	325.1 -> 297	219.1 -> 84.2	323.2 -> 105	286.1 -> 121	328.2 -> 165	Transition	hod
- x/3x/301/ a			5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	9	5/25/2017 9	9	9	5/25/2017 9	9	5/25/2017 9	5/25/2017 9		5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	5/25/2017 9	Acq. Date- Time	p1 cal 1a
4.91/1	1.000	4 980	5.374	6.634	5.846	4.892	4.932	6.398	4.135	4.991	6.382	5.681	5.414	4.418	5.019	6.301	5.990	6.081	5.696	6.025	4.775	6.772	5.452	6.063	6.327	4.797	6.401	6.073	6.187	5.741	4.830	6.525	5.558	6.460	4.908	5.789	5.591	4.934	RT	q
21196	2011	2344	152186	18180	7322	34689	81914	1055	4580	149953	208882	10631	59424	19182	30388	269603	19653	197099	230910	243309	19968	41309	41536	44453	94977	7040	15254	180317	53608	90514	56613	53976	105988	6177	7746	18953	24681	919	Resp.	p1 cal 1a Results
44.68	20.71	17 02	1505.57	21.30	85.79	890.79	217.25	3.25	19.57	5.39	Infinity	Infinity	71.99	206.35	1008.87	190.47	134.61	27964.76	35.90	378.24	176.74	34.00	104.72	158.34					6766.73	69.03		113.50	189.14	32.53	20.45	39.68	1187.81	4.35	S/N	sults
302.1 -> 186		286 2 -> 171		271.1 -> 208	414.3 -> 57.3	342.2 -> 55.3	344.2 -> 308	328.2 -> 211	286.2 -> 165	150.1 -> 119	310.2 -> 105	219.1 -> 97.1	238.1 -> 220	286.2 -> 157	300.2 -> 128	310.1 -> 148	337.2 -> 188	279.2 -> 250	271.2 -> 167	256.2 -> 152	302.2 -> 128	285.1 -> 153	258.2 -> 133	V	v	300.2 -> 165	↓ V	325.2 -> 262	261.2 -> 55.3	240.1 -> 131	136.1 -> 119	309.1 -> 205	232.2 -> 77.1	325.1 -> 215	219.1 -> 56.3	323.2 -> 188	286.1 -> 222	328.2 -> 211	Transition	Qualifier 1 M
20.32	10.00	10 30	16.35	7097.73	44.16	120.84	193.93	60'0	31.90	11.29	92.69	20.18	43.99	22.72	29.29	49.87	92.01	1128.84	992.13	78.40	89.56	18.01	3651.28	146.44	54.04	35.25	24.76	246.56	28.06	63.35	6.50	90,40	341.21	426.96	7.40	88.73	61.35	9.89	N/S	Qualifier
Noroxycodone-D3	Notityalocoaotie-D3	Norhydrocodone-D3	Norfentanyl-D5	Nordiazepam-D5	Norbuprenorphine-D3	Naltrexone-D3	Naltrexol-D3	Naloxone-D5	Morphine-D6	Methamphetamine-D11	Methadone-D9	Meprobamate-D7	Ketamine-D4	Hydromorphone-D6	Hydrocodone-D6	Fluoxetine-D6	Fentanyl-D5	EDDP-D3	Doxylamine-D5	Diphenhydramine-D3	Dihydrocodeine-D6	Diazepam-D5	Dextrorphan-D3	Dextromethorphan-D3	Cyclobenzaprine-D3	Codeine-D6	Clonazepam-D4	Citalopram-D6	Carisoprodol-D7	Bupropion-D9	Amphetamine-D11	Alprazolam-D5	alpha-PVP-d8	a-hydroxyalprazolam-D5	Acetyl Norfentanyl-D5	Acetyl Fentanyl-D5	7-Aminoclonazepam-D4	6-MAM-D6	Name	ISTD Method
305.2 -> 287	203.2 202	200 2 080	238.2 -> 84.2	276.1 -> 140	417.3 -> 101	345.2 -> 327	347.2 -> 329	333.2 -> 315	292.2 -> 152	161.2 -> 97.1	319.3 -> 268	226.2 -> 165	242.1 -> 129	292.2 -> 185	306.2 -> 202	316.2 -> 44.3	342.3 -> 105	282.2 -> 235	276.2 -> 187	259.2 -> 167	308.2 -> 202	290.1 -> 198	261.2 -> 157	275.2 -> 171	279.2 -> 215	306.2 -> 218	320.1 -> 217	331.2 -> 109	268.2 -> 183	249.2 -> 185	147.2 -> 130	314.1 -> 286	240.2 -> 91.1	330.1 -> 302	224.2 -> 84.2	328.2 -> 105	290.1 -> 121	334.2 -> 165	Transition	d
4.896	4.300	4 060	5.353	6.613	5.825	4.871	4.932	6.458	4.114	4.950	6.360	5.681	5.413	4.397	5.017	6.299	5.990	6.081	5.675	6.024	4.734	6.771	5.431	6.083	6.326	4.794	6.380	6.072	6.166	5.741	4.789	6.545	5.557	6.459	4.888	5.788	5.590	4.913	꾸	ISTD
100131	04140	5414A	617283	58581	29407	175808	277114	594	3415	223128	1048763	56071	257631	67538	166128		961681	87223	1154567	1275926	113237	183138	218230	222184	447241	31381	21512	788865	344993	414176	76996	206125	450081	30817	409089	1078802	105337	38492	Resp.	ISTD Results
								Not Evaluated																														Peak shape ok.		

22														
Zolpidem	Venlafaxine	Trazodone	Tramadol	Temazepam	Sufentanil	Sertraline	Quetiapine	Promethazine	Phentermine	Oxymorphone	Oxycodone	Oxazepam	Name	Compound Method
308.2 -> 235	278.2 -> 58.3	372.2 -> 176	264.2 -> 58.3	301.1 -> 255	387.2 -> 238	306.1 -> 158	384.2 -> 253	285.1 -> 86.2	150.1 -> 65.2	302.1 -> 284	316.2 -> 298	287.1 -> 240	Transition	d
308.2 -> 235 5/25/2017 9 5.935	5/25/2017 9	372.2 -> 176 5/25/2017 9	264.2 -> 58.3 5/25/2017 9 5.471	301.1 -> 255 5/25/2017 9 6.609	387.2 -> 238 5/25/2017 9 6.253	306.1 -> 158 5/25/2017 9 6.527	384.2 -> 253 5/25/2017 9 6.274	5/25/2017 9	5/25/2017 9	302.1 -> 284 5/25/2017 9	316.2 -> 298 5/25/2017 9 4.934	287.1 -> 240 5/25/2017 9	Acq. Date- Time	p1 cal 1a
5.935	5.818	6.173	5.471	6.609	6.253	6.527	6.274	6.305	5.133	4.274	4.934	6.468	저	p
154449	220395	165408	217554	66791	16736	77819	212287	301646	18066	19779	42549	12176	Resp.	p1 cal 1a Results
131.68 308.2 -> 263	110.24 278.2 -> 260	279.50 372.2 -> 148.	312.84 264.2 -> 43.3	84.09 301.1 -> 283.	93.17 387.2 -> 111	289.47 306.1 -> 275	553.21 384.2 -> 221	295.32 285.1 -> 71.3	Infinity 150.1 -> 133.	112.58 302.1 -> 227	149.53 316.2 -> 241	45.12 287.1 -> 268.	S/N Transition	sults Qualifier 1 M. Qualifier
	. 23.27	. 321.48	25.92	11.25		438.69		146.54	. Infinity			. Infinity	S/N	Qualifier
10904 Zolpidem-D6	23.27 Venlafaxine-D6	321.48 Trazodone-D6	25.92 Tramadol-13C-D3	11.25 Temazepam-D5	50.98 Sufentanil-D5	438.69 Sertraline-D3	428.86 Quetiapine-D8	146.54 Promethazine-D3	Infinity Phentermine-D5	95.37 Oxymorphone-D3	37.60 Oxycodone-D6	Infinity Oxazepam-D5	Name	ISTD Method
314.2 -> 235 5.934 795993	284.2 -> 64.3	378.2 -> 182	268.2 -> 58.3	306.1 -> 260 6.588 32593	392.2 -> 238 6.232 644115	309.1 -> 275 6.525	392.2 -> 226 6.232 276141	288.2 -> 89.2	155.2 -> 96.2	305.2 -> 287	322.2 -> 304 4.914	292.1 -> 246	Transition	10d
5.934	5.817	6.152	5.451	6.588	6.232	6.525	6.232	6.304	5.132	4.896	4.914	6.447	RT	ISTD
795993	958120	713558	5.451 1019528	325937	644115	381636	276141	6.304 1645742	5.132 284219	100131	199349	62190	Resp.	ISTD Results



Zopiclone	Zalepion	Verapamil	Trimipramine	Tapentadol	Pseudoephedrine	Protriptyline	Propoxyphene	Primidone	Prazepam	Phenytoin	Phencyclidine	Phenazepam	Pentazocine	Ondansetron	Nortriptyline	Norpropoxyphene	Normeperidine	Mitragynine	Mirtazapine	Midazolam	Metoprolol	Methylphenidate	Meperidine	MDMA	MDEA	MDA	Maprotiline	Levamisole	Imipramine	Flurazepam	Flunitrazepam	Estazolam	Doxepin	Desipramine	Cocaine	Clomipramine	Chlordiazepoxide	Carbamazepine	Benzoylecgonine	Amoxapine	Amitriptyline	alpha-hydroxymidazolam	7-aminoflunitrazepam	Name
389.1 -> 244	306.1 -> 236	455.3 -> 165	295.2 -> 100	222.2 -> 107	166.1 -> 148	264.2 -> 155	340.2 -> 58.3	219.1 -> 91.2	325.1 -> 271	253.1 -> 104	244.2 -> 86.2	349.0 -> 206	286.2 -> 218	294.2 -> 184	264.2 -> 91.2	326.2 -> 44.3	234.1 -> 42.3	399.2 -> 174	266.2 -> 195	326.1 -> 223	268.2 -> 116	234.2 -> 84.2	248.2 -> 220	194.1 -> 163	208.1 -> 163	180.1 -> 163	278.2 -> 91.2	205.1 -> 91.2	281.2 -> 86.2	388.2 -> 315	314.1 -> 268	295.1 -> 267	280.2 -> 107	V	304.2 -> 182	315.2 -> 86.2	300.1 -> 227		290.1 -> 168	314.1 -> 271	278.2 -> 91.2	342.1 -> 324	284.1 -> 135	Transition
5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45		5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45	5/25/2017 9:45_	Acq. Date-Time
5.856	6.310	6.200	6.454	5.486	4.620	6.318	6.245	5.486	7.037	6.114	5.932	6.548	5.700	5.781	6.318	6.246	5.648	6.120	5.766	6.571	5.479	5.545	5.625	5.123	5.283	5.004	6.091	4.960	6.376	6.121	6.513	6.475	6.151	6.357	5.615	6.593	6.636	6.198	5.413	6.370	6.377	6.508	5.783	RT
30912	46095	178339	380130	128836	807741	555645	211035	6198	234143	2496	164774	37873	109145	75381	377953	25633	61037	58166	123159	24937	26460	244942	46705	76168	91898	38998	133436	38166	341449	123287	48708	52581	105061	252944	132421	325411	27019	23032	16117	69126	220612	75329	45488	Resp.
58.92 389.1 -> 216	179.10 306.1 -> 264	810.09 455.3 -> 150	495.16 295.2 -> 58.3	222.2 ->	Infinity 166.1 -> 133		Infinity 340.2 -> 266	219.1 ->	356.82 325.1 -> 140	50.62 253.1 -> 182	11688 244.2 -> 91.1	162.65 349.0 -> 183	286.2			54.31 326.2 -> 252		178.12 399.2 -> 238	124.88 266.2 -> 72.3		540.51 268.2 -> 56.3		920.01 248.2 -> 174		12087 208.1 -> 105	180.1 ->					······							237.1 ->	290.1 ->	314.1 ->	y		161.93 284.1 -> 93.2	S/N Transition
123.20	117.91	132.38	533.33	67.78	128.55	0.11	121.60	18.94	65.89	39.89	Infinity	271.26	Infinity	72.67	38566	39.72	224.19	90.21	Infinity	39.53	689.19	Infinity	239.10	Infinity	Infinity	30237	8.85	Infinity	Infinity	14117	27.58	6764.50	Infinity	Infinity	11135	520.27	Infinity	198.25	22.45	239.85	Infinity	105.17	121.35	S/N
~~~~ ş	N	·				······································	ס		T			money							~		7				-			· 1	_	N								r			۶I	0)	7-aminoflunitrazepam-D7	Name
393.1 -> 244	310.2 -> 240	298.2 -> 103	298.2 -> 103	225.2 -> 107	169.1 -> 151	267.2 -> 233	351.3 -> 277	330.1 -> 276	330.1 -> 276	263.2 -> 192	249.2 -> 86.2	353.0 -> 183	289.2 -> 72.3	289.2 -> 72.3	267.2 -> 233	331.2 -> 44.3	238.2 -> 164	243.1 -> 200	330.1 -> 295	330.1 -> 295	252.2 -> 224	252.2 -> 224	252.2 -> 224	200.2 -> 166	214.2 -> 166	185.1 -> 168	252.2 -> 224	307.2 -> 185	284.2 -> 61.3	393.1 -> 244	321.1 -> 245	300.1 -> 272	283.2 -> 107	270.2 -> 75.3	307.2 -> 185	318.2 -> 89.2	305.1 -> 286	243.1 -> 200	298.2 -> 171	281.2 -> 91.2	281.2 -> 91.2	346.1 -> 328	291.2 -> 138_	Transition
5.856	6.289	6.454	6.454	5.485	4.619	6.398	6.243	7.015	7.015	6.094	5.911	6.568	5.699	5.699	6.398	6.245	5.647	6.197	6.570	6.570	5.624	5.624	5.624	5.103	5.262	4.983	5.624	5.615	6.375	5.856	6.491	6.453	6.130	6.357	5.615	6.593	6.636	6.197	5.391	6.416	6.416	6.508	5.761	RT
140692	166482	18644	18644	648663	386496	427906	251158	10058	10058_	11346	837966	12484	440434	440434	427906	99529	227707	10386	390727	390727	248580	248580	248580	41032	461555	192868	248580	566420	893805	140692	8912	258070	504923	12035	566420	16171	232419	10386	5504	425061	425061	376843	229551	Resp.

Toxicology AM method 25 external prep information

Ppd 3/31/17 Exp: 9/21/17 lot 92117 Stock solution 1mg/ml 100 ul each for all except morphine 200 ul in 9400 ul meoh working solution 10000 ng/ml in meoh mirtazapine, amitriptyline, codeine, diphenhydramine, 20000 ng/ml meoh morphine

A A

diphenhydramine	codeine	amitriptyline	mirtazapine	Morphine	Drug	
fn09161502	fe10271401	fn07081401	fe04201503	fe08141515	lot	
9/1/2020	11/1/2019	9/1/2019	4/1/2020	11/1/2020	expiration	(

AM 25 control 100 ul working solution in 9900 ul blood lot 62117

by AMN

ppd 3/21/17 Exp 6/21/17

Concentration 100ng/ml amitriptyline, codeine, diphenhydramine, mirtazapine 200/ng/ml morphine



Compound Method	25	p1 external control	p1 ext	p1 external control Results	ol Results	Qualifier 1 M	Qualifi	ISTD Method	Nethod		
Name	Transition	Acq. Date-Time	리	Resp.	N/S	Transition 328.2 -> 211	NS	6-MAM-DA	Name M-D6	lame Transition	lame
7-aminoclonazepam		5/25/2017 10:14 PM				286.1 -> 222		7-Am	7-Aminoclonazepam-D4	nazepam-D4 290.1 -> 121	nazepam-D4 290.1 -> 121
Acetyl Fentanyl	323.2 -> 105	5/25/2017 10:14 PM				323.2 -> 188		Ace	Acetyl Fentanyl-D5		328.2 -> 105
Acetyl Norfentanyl	v	5/25/2017 10:14 PM	4.949	75	1.42	219.1 -> 56.3	2.11	Ace	Acetyl Norfentanyl-D5		224.2 -> 84.2
a-hydroxyalprazolam	325.1 -> 297	5/25/2017 10:14 PM	6,783	50	0.78	325.1 -> 215		a-hydro	a-hydroxyalprazolam-D5		330.1 -> 302
alpha-PVP	1	5/25/2017 10:14 PM	5.334	142	0.59	232.2 -> 77.1		alpha-PVP-d8	VP-d8		240.2 -> 91.1
Alprazolam	309.1 -> 281	5/25/2017 10:14 PM	6.525	412	0.61	309.1 -> 205	1.03	Alprazo	Alprazolam-D5	314.1 ->	314.1 -> 286
Amphetamine	136.1 -> 91.1	5/25/2017 10:14 PM	21012	32197	21.19	136.1 -> 119	0.52	Ampt	Amphetamine-D11	netamine-D11 147.2 -> 130	147.2 ->
Bupropion	240.1 -> 184	5/25/2017 10:14 PM	5.557	589	2.01	240.1 -> 131	3.09	Bup	Bupropion-D9	ropion-D9 249.2 -> 185	
Carisoprodol	261.2 -> 176	5/25/2017 10:14 PM	6.106	38	0,16	261.2 -> 55.3		Car	Carisoprodol-D7	isoprodol-D7 268.2 -> 183	
Citalopram	325,2 -> 109	5/25/2017 10:14 PM				325.2 -> 262		<u>Ω</u>	Citalopram-D6		331.2 -> 109
Clonazepam	316.1 -> 269	5/25/2017 10:14 PM	0) G1 4	167	0.93	316.1 -> 213	3.13	Ω	Clonazepam-D4		320.1 -> 217
Codeine	300.2 -> 215	5/25/2017 10:14 PM	4.797	61186	151.98		468.78	$\circ$	Codeine-D6		306.2 -> 218
Cyclobenzaprine	276.2 -> 214	5/25/2017 10:14 PM	6.348	123		¥	0.43	_	Cyclobenzaprine-D3	and a state of the second s	279.2 -> 215
Dextromethorphan	272.2 -> 171	5/25/2017 10:14 PM	6.124	172	0.70	272.2 -> 147	0.72	_	Dextromethorphan-D3	۵ 	۵ 
Dextrorphan	258.2 -> 157	5/25/2017 10:14 PM				258.2 -> 133		-	Dextrorphan-D3		261.2 -> 157
Diazepam	285,1 -> 193	5/25/2017 10:14 PM	6.386	1032	0.64	285.1 -> 153	0,58		Diazepam-D5		290.1 -> 198
Dihydrocodeine	302.2 -> 198	5/25/2017 10:14 PM	4.816	331	2.59	302.2 -> 128	3.20	0	Dihydrocodeine-D6	01/01/02/02/02/02/02/02/02/02/02/02/02/02/02/	308.2 ->
Diphenhydramine	256.2 -> 167	5/25/2017 10:14 PM	6.025	22167		256.2 -> 152	306.66	D	Diphenhydramine-D3		
Doxylamine	271.2 -> 182	5/25/2017 10:14 PM	5.799	129	0.46	271.2 -> 167	0.40		Doxylamine-D5	oxylamine-D5 276.2 -> 187	
EDDP	279.2 -> 235	5/25/2017 10:14 PM	6.081	59	1.04	279.2 -> 250		m	EDDP-D3	DDP-D3 282.2 -> 235	282.2 ->
Fentanyl	٧.	5/25/2017 10:14 PM	5.909	67	0.37	337.2 -> 188			Fentanyl-D5	342.3 ->	342.3 -> 105
Fluoxetine	310.1 -> 44.3	5/25/2017 10:14 PM	6.301	345	0.27	310.1 -> 148		т	Fluoxetine-D6	6	6 316.2 -> 44.3
Hydrocodone	300.2 -> 198	5/25/2017 10:14 PM	4.817	36542	320.98	300.2 -> 128	145.65	II	Hydrocodone-D6	ydrocodone-D6 306.2 -> 202	
Hydromorphone	286.2 -> 184	5/25/2017 10:14 PM	4.135	38103	138.39	286.2 -> 157	796.77	II	Hydromorphone-D6	ydromorphone-D6 292.2 -> 185	292.2 ->
Ketamine	238.1 -> 125	5/25/2017 10:14 PM	5.373	541	3,41	238.1 -> 220	0.29	x	Ketamine-D4	etamine-D4 242.1 -> 129	242.1 ->
Meprobamate	219.1 -> 158	5/25/2017 10:14 PM	5.701	101	0.42	219.1 -> 97.1	0.54	2	Meprobamate-D7	226.2 ->	226.2 ->
Methadone	310.2 -> 265	5/25/2017 10:14 PM	03522	5140	6.74	310.2 -> 105	1.19	Ζ	Methadone-D9	lethadone-D9 319.3 -> 268	
Methamphetamine	150.1 -> 91.1	5/25/2017 10:14 PM	5.011	112326	11.35	150.1 -> 119	1.76	2	Methamphetamine-D11	vine-D11	nine-D11   161.2 -> 97.1
Morphine	286.2 -> 201	5/25/2017 10:14 PM	4.135	71033		286.2 -> 165	185.93	2	Morphine-D6		292.2 -> 152
Naloxone	328.2 -> 309	5/25/2017 10:14 PM	6.357	1509		328.2 -> 211	0,66	7	Naloxone-D5		
Naltrexol	344.2 -> 326	5/25/2017 10:14 PM	4.892	4103	20.52	344.2 -> 308			Naltrexol-D3		347.2 -> 329
Naltrexone	342.2 -> 324	5/25/2017 10:14 PM	4.852	96	0.73	342.2 -> 55.3			Naltrexone-D3	3	)3 345.2 -> 327
Norbuprenorphine	414,3 -> 101	5/25/2017 10:14 PM	6,130	171	1.96	414.3 -> 57.3	0.95	- 1	Norbuprenorphine-D3		417.3 -> 101
Nordiazepam	271.1 -> 140	5/25/2017 10:14 PM	6.675	28	0.37	271.1 -> 208	1.10	_	Nordiazepam-D5		276.1 -> 140
Norfentanyl	233.2 -> 84.2	5/25/2017 10:14 PM	5.292	136	11.00	233.2 -> 55.3	0.71	7	Norfentanyl-D5		238.2 -> 84.2
Norhydrocodone	286.2 -> 199	5/25/2017 10:14 PM	4.940	86		286.2 -> 171	1.71	z	Norhydrocodone-D3		289.2 -> 202
Noroxycodone	302.1 -> 284	5/25/2017 10:14 PM	4.796	319	1.30	302.1 -> 186	0.31	z	Noroxycodone-D3	proxycodone-D3 305.2 -> 287	305.2 -> 287
O-desmethyl-tramadol	250.2 -> 58.3	5/25/2017 10:14 PM	4.945	<b>8558</b>	14.73		72.84	ò	O-desmethyl-tramadol		. 256.2 -> 64.3
Oxazenam	287.1 -> 240	5/25/2017 10:14 PM				287.1 -> 268		0	Oxazepam-D5	292.1	

		Oxycodone	Oxymorphone	Phentermine	Promethazine	Quetiapine	Sertraline	Sufentanil	Temazepam	Tramadol	Trazodone	Venlafaxine	Zolpidem
	Name	one	rphone	mine	hazine	oine	ne	mil	epam	0	one	xine	в
CUIUU	Transition	316.2 -> 298.	302.1 -> 284.	150.1 -> 65.2	285.1 -> 86.2	384.2 -> 253.	306.1 -> 158	387.2 -> 238.	301.1 -> 255	264.2 -> 58.3	372.2 -> 176	278.2 -> 58.3	308.2 -> 235
h i extra tra como	Acq. Date-Time	316.2 -> 298 5/25/2017 10:14 PM	302.1 -> 284 5/25/2017 10:14 PM	150.1 -> 65.2 5/25/2017 10:14 PM	285.1 -> 86.2 5/25/2017 10:14 PM	384.2 -> 253 5/25/2017 10:14 PM	306.1 -> 158 5/25/2017 10:14 PM	387.2 -> 238 5/25/2017 10:14 PM	. 5/25/2017 10:14 PM	264.2 -> 58.3 5/25/2017 10:14 PM	372.2 -> 176 5/25/2017 10:14 PM	278.2 -> 58.3 5/25/2017 10:14 PM	308.2 -> 235 5/25/2017 10:14 PM
, ind	RT	4.854	4,414		6,080	6.274	6.648	6.253	6,446	5.451	6.193	5.737	6.037
	Resp.	508	515		17	06	72	1036	270	5059	585	2582	228
pi exiental control nesula	S/N				0.70								
	Transition	2.19 316.2 -> 241	1.21 302.1 -> 227	150.1 -> 133	0.70 285.1 -> 71.3	1.45 384.2 -> 221	1.33 306.1 -> 275	5.22 387.2 -> 111	0.79 301.1 -> 283	6.17 264.2 -> 43.3	2.03 372.2 -> 148	3.71 278.2 -> 260	1.61 308.2 -> 263
Quant	S/N	0.65	0.75		0.67	0.53	5.20	2.07		0.67	2.19		
	Name	Oxycodone-D6	Oxymorphone-D3	Phentermine-D5	Promethazine-D3	Quetiapine-D8	Sertraline-D3	Sufentanil-D5	Temazepam-D5	Tramadol-13C-D3	Trazodone-D6	Venlafaxine-D6	Zolpidem-D6
160	Transition	322.2 -> 304	305.2 -> 287	155.2 -> 96.2	288.2 -> 89.2	392.2 -> 226 6.253 26744	309.1 -> 275 6.525	392.2 -> 238	306.1 -> 260	268.2 -> 58.3	378.2 -> 182	284.2 -> 64.3	314.2 -> 235
ت ت	꼭	4.934	4.896	5.132		6.253		6.232	6.588	5.471		5.817	
SILINSAN CLO	Resp.	192253	92681	5.132 225038	6.304 16409	267441	364489	615800	336590	933566	6.152 697484	887301	5.934 749099



Zop	Zale	Vera	) Trim	Тар	Pse	Prot	Prop	Prim	Praz	Phei	Phe	Phe	Pent	Ond	Nort	Not	Nor	Mitra	Mirtz	Mida	Metc	Meth	Mep	MDMA		Map	Leva	Imip			Doxepin	Desi	Cocaine	Clon	Chlo	Cart	Benz	Amo	Amit	7-an	
Zopiclone	Zalepion	Verapamil	Trimipramine	Tapentadol	Pseudoephedrine	Protriptyline	Propoxyphene	Primidone	Prazepam	Phenytoin	Phencyclidine	Phenazepam	Pentazocine	Ondansetron	Nortriptyline	Norpropoxyphene	Normeperidine	Mitragynine	Mirtazapine	Midazolam	Metoprolol	Methylphenidate	Meperidine	A Z		Maprotiline	Levamisole	Imipramine	Flurazepam	Ehmitrazenam	epin	Desipramine	aine	Clomipramine	Chlordiazepoxide	Carbamazepine	Benzoylecgonine	Amoxapine	Amitriotyline	7-aminoflunitrazepam	Name
389.1 -> 244	306.1 -> 236	455.3 -> 165	295.2 -> 100	222.2 -> 107	166.1 -> 148	264.2 -> 155	340.2 -> 58.3	219.1 -> 91.2	325.1 -> 271	253.1 -> 104	244.2 -> 86.2	349.0 -> 206	286.2 -> 218	294.2 -> 184	264.2 -> 91.2	326.2 -> 44.3	234.1 -> 42.3	399.2 -> 174	266.2 -> 195	326.1 -> 223	268.2 -> 116	234.2 -> 84.2	248.2 -> 220	194.1 -> 163	2001 -> 100.1	278.2 -> 91.2	205.1 -> 91.2	281.2 -> 86.2	388.2 -> 315	21/ 1 -> 20/	280.2 -> 107	267.2 -> 72.3	304.2 -> 182	315.2 -> 86.2	300.1 -> 227	237.1 -> 193	290.1 -> 168	314.1 -> 271	278.2 -> 91.2	284.1 -> 135	Tansiuon
5/25/2017 10:24 PM	5/25/2017 10.24 FIN	5/25/2017 10:24 PM	5/25/2017 10:24 PM	5/25/2017 10:24 PM	5/25/2017 10:24 PM	5/25/2017 10.24 FM	5/25/2017 10:24 PM	5/25/2017 10:24 PM	5/25/2017 10:24 PM	5/25/2017 10:24 PM	5/25/2017 10:24 PM	5/25/2017 10:24 PM	5/25/2017 10:24 PM	5/25/2017 10:24 PM	5/25/2017 10:24 PM	5/25/2017 10:24 PM	Acy. Date-1111e																								
6,181			6.515		4.702	6.399	6.326	5.710	6.937	6.135	5.932	6.528			6.399	6.388	5.669		5.766		5.316		5.830		J. 10J	6.212	4.817	6.416	6.263	6 513	6 200	6.378	5.800	6.918	6.473	6.178		6.492	6.417	5.845	01
66			379					N			602	1616			16		96		10964		44		985		30			ω		5/2		2383			365	127			12550	1.000	Treap.
5 2.28			9 0.77								1.95	5 2.91			08.0	1.28	0.77		. 739.06		4 1.86		201		5 60.00							3 1.39	1993			7 2.08					210
8 389.1 -> 216	306.1 -> 264	455.3 -> 150	7 295.2 -> 58.3		166.1 ->	264.2 ->			325.1 ->	_		1 349.0 -> 183	286.2 -> 41.3	294.2 -> 212			7 234.1 -> 160		16 266.2 -> 72.3		-			194 1 -> 105			-			293.1 -> 203		9 267.2 -> 44.3	- in the second second	315.2 -> 58.3	300.1 ->	237.1 ->			0 278.2 -> 105	284.1 ->	· · · · · ·
0.65								2.31		0.36					348.66				460.31		25.28		0.64			0.49	1.99	0.70		C.0.7		5.51	-	0.94	-			15.86	688.60	3.53	
	Zaleplon-D4	Trimipramine-D3	Trimipramine-D3	Tapentadol-D3	Pseudoephedrine-D3	Nortriptyline-D3	Propoxyphene-D11	Prazepam-D5	Prazepam-D5	Phenytoin-D10	Phencydlidine-D5	Phenazepam-D4	Pentazocine-13C3	Pentazocine-13C3	Nortriptyline-D3	Norpropoxyphene-D5	Normeperidine-D4	Carbamazepine-13C6	Midazolam-D4			Meperidine-D4	Meneridine-D4	MDMA-D6		Meperidine-D4	Cocaine-D3	Imipramine-D3	Zopiclone-D4	Elunitrazonam D7	Doxepin-D3	Desipramine-D3	Cocaine-D3	Clomipramine-D3	Chlordiazepoxide-D5	Carbamazepine-13C6	Benzoylecgonine-D8	Amitriptyline-D3	Amitript/line-D3	7-aminoflunitrazepam-D7	
393.1 -> 244	310.2 -> 240	298.2 -> 103	298.2 -> 103	225.2 -> 107_	169.1 -> 151	267.2 -> 233	351.3 -> 277	330.1 -> 276	330.1 -> 276	263.2 -> 192	249.2 -> 86.2	353.0 -> 183	289.2 -> 72.3	289.2 -> 72.3	267.2 -> 233	331.2 -> 44.3	238.2 -> 164	243.1 -> 200	330.1 ~ 295	330.1 -> 295	252.2 -> 224	252.2 -> 224	$\vee$	214.2 ~ 100	103.1 -> 100	252.2 -> 224	307.2 -> 185	284.2 -> 61.3	393.1 -> 244	301.1 -> 2/2	283.2 -> 107	270.2 -> 75.3	307.2 -> 185_	318.2 -> 89.2	305.1 -> 286	243.1 -> 200	298.2 -> 171	281.2 -> 91.2	281.2 -> 91.2	291.2 -> 138_	1 IGHOU
. 5.856	. 6.289	6.454	-										5.699				5.626		6.591					5 103					5.856			6.357		6.593				6.416	6.416	-	
92079	170940	17340	17340	608277	331561	410372	241488	303785	303785	10766	786812	14300	408701	408701	410372	85268	217089	10128	357672	357672	221840	221840	221840	38358	1/23/1	221840	526316	816045	92079	00077	488397	11834	526316	14573	215228	10128	4907	411237	411237	202449	ivesh:

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Compound Method	Ъд	p1 negative	p1	p1 negative Results	Results	Qualifier 1 M. Quali.	Quali	ISTD Method	od .		ISTD Results
Name	Transition	Acq. Date-Time	RT	Resp.	S/N	Transition	N/S	Name	Transition	ōŋ	ion RT
Oxycodone	316.2 -> 298	. 5/25/2017 9:55 PM	4.854	680		2.65 316.2 -> 241	••••••	Oxycodone-D6	322.2 -> 304		04 4.914
Oxymorphone	302.1 -> 284	302.1 -> 284 5/25/2017 9:55 PM	4,455	502		1.49 302.1 -> 227		0.49 Oxymorphone-D3	305.2 -> 287 4.896	7	37 4.896
Phentermine	150.1 -> 65.2	5/25/2017 9:55 PM	5.214	1999		Infinity 150.1 -> 133		Phentermine-D5	155.2 -> 96.2		.2 5.132
Promethazine	285.1 -> 86.2	5/25/2017 9:55 PM	6.285	215		0.83 285.1 -> 71.3	0.47	weither the	288.2 -> 89.2	2	.2 6.304
	384.2 -> 253	384.2 -> 253 5/25/2017 9:55 PM	6.253	551		2.09 384.2 -> 221		Quetiapine-D8	392.2 -> 226	6	6 6.232
	306.1 -> 158	. 5/25/2017 9:55 PM	6.567	/ 135		1.45 306.1 -> 275		10.20 Sertraline-D3	309.1 -> 275		5 6.525
Sufentanil	387.2 -> 238	387.2 -> 238 5/25/2017 9:55 PM	6.233	807 8		3.92 387.2 -> 111	1000000	Sufentanil-D5	392.2 -> 238   6.232	1	6.232
Temazepam	301.1 -> 255	301.1 -> 255 5/25/2017 9:55 PM	6.446	951		0.70 301.1 -> 283	100100	Temazepam-D5	306.1 -> 260 6.588	!	6.588
Tramadol	264.2 -> 58.3	5/25/2017 9:55 PM	5.471	5310		6.69 264.2 -> 43.3	0.58		268.2 -> 58.3		5.451
S Trazodone	372.2 -> 176	. 5/25/2017 9:55 PM	6.173	1184		4.68 372.2 -> 148	2.39	Trazodone-D6	378.2 -> 182		. 6.152
Venlafaxine	278.2 -> 58.3	5/25/2017 9:55 PM	5.737	3943		5.53 278.2 -> 260		Venlafaxine-D6	284.2 -> 64.3		5.817
Zolpidem	308.2 -> 235	308.2 -> 235 5/25/2017 9:55 PM			59 0.	0.42 308.2 -> 263		0.60 Zolpidem-D6		•••••	5.934



ľ,		<u>୍</u> କ	Tr	T ₂	Pe	Pr	Pr	Pr	Pr	P	P	ੂ Ph	Pe	Q	Nc	N	Z	 Mi	ĭ	<u> </u>	<u>چ</u>	Ň	M N	M	4	MDA	<u>s</u> 1	- -			י קובי	DC	De	ୁ ନ	õ	ି ଦୁ	្ល	Bp⊇	<u>,</u> 4	) al	7-:	-	
Lalepion		Verapamil	Trimipramine	Tapentadol	Pseudoephedrine	Protriptyline	Propoxyphene	Primidone	Prazepam	Phenytoin	Phencyclidine	Phenazepam	Pentazocine	Ondansetron	Nortriptyline	Norpropoxyphene	Normeperidine	Mitragynine	Mirtazapine	Midazolam	Metoprolol	Methylphenidate	Meperidine	MDMA	MDEA	)A	Maprotiline	levamisole	minramina	Flunitazepam	Estazolam	Doxepin	Desipramine	Cocaine	Clomipramine	Chlordiazepoxide	Carbamazepine	Benzovlecconine	Amiuripiyiine	alpha-hydroxymidazolam	7-aminoflunitrazepam	Name	Compound Method
	306.1 -> 236	455.3 -> 165	295.2 -> 100	222.2 -> 107	166.1 -> 148	264.2 -> 155	340.2 -> 58.3	219.1 -> 91.2	325.1 -> 271	253.1 -> 104	244.2 -> 86.2	349.0 -> 206	286.2 -> 218	294.2 -> 184	264.2 -> 91.2	326.2 -> 44.3	234.1 -> 42.3	399.2 -> 174	266.2 -> 195	۷.	268.2 -> 116	234 2 -> 84 2	248.2 -> 220	194.1 -> 163	208.1 -> 163	180 1 -> 163	278.2 -> 91.2	201.2 -> 00.2	1.000 - 2.000	314.1 -> 208	295.1 -> 267	280.2 -> 107	267.2 -> 72.3	304.2 -> 182	315.2 -> 86.2	300.1 -> 227	237.1 -> 193	290.1 -> 168	216.2 -> 91.2	342.7 -> 324	284.1 -> 135	Transition	
	5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0		5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0								1			5/25/2017 10:0	5/25/2017 10.0			5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0	5/25/2017 10:0			5/25/2017 10.0		1.121		p2 negative
	5.983		6.434		4.580	6.235	6.509	5.731	6.917	6.013		6.488		5.720	6.399		5.607		5.745	6.592		5 648	5.830				6.212			6.513		6.070	6.337	5.595	6.878	6.473			6 /10	6.40/	5.783	RT	p2
****			405		730	37	177	2956	62	74		1085		79	529		108		133	86		131	2018		101	117	2425	0+02	3776	1324	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	63	1622	268	30	458				25	2010 S	Re	p2 negative Results
2	0.90	0.81	0.74		0.78	3.96	0.63	0.92	0.33	0.57		6.83		1.72	1.15		1.18		0.49	0.74		3 02	7.97		0.72	22 65	065	3.07	23 0 061	1.23	2	0.45	2.38	1.31	0.38	1.66		0,00	0.20	0.35 65.0	1.75	S/N	ults
	306.1 -> 264	455.3 -> 150	295.2 -> 58.3	222.2 -> 121	166.1 -> 133	264.2 -> 161	340.2 -> 266	219.1 -> 162	325.1 -> 140	253.1 -> 182	244.2 -> 91.1	349.0 -> 183	286.2 -> 41.3	294.2 -> 212	264.2 -> 233	326.2 -> 252	234.1 -> 160	399.2 -> 238	266.2 -> 72.3	326.1 -> 249	268.2 -> 56.3	234 2 -> 56 3	248.2 -> 174	194.1 -> 105	208.1 -> 105	180 1 -> 105	278.2 -> 117	201.2 -> 178	J00.2 - / J1/	314.1 -> 239	295.1 -> 205	280.2 -> 77.2	267.2 -> 44.3	304.2 -> 105	315.2 -> 58.3	300.1 -> 282	237.1 -> 194	290.1 -> 105	214.1 ~ 102	342.1 -> 203	284.1 -> 93.2	Transition	Qualifier 1 M.
-	0.91		0.34		0.52	0.18	0.29		0.37					0.76	2.72		0.54				j		0.51		0.45		173	100		0.54			3.43								5.33		Q
1	Zaleplon-D4	Trimipramine-D3	Trimipramine-D3	Tapentadol-D3	Pseudoephedrine-D3	Nortriptyline-D3	Propoxyphene-D11	Prazepam-D5	Prazepam-D5	Phenytoin-D10	Phencydlidine-D5	Phenazepam-D4	Pentazocine-13C3	Pentazocine-13C3	Nortriptyline-D3	Norpropoxyphene-D5	Normeperidine-D4	Carbamazepine-13C6	Midazolam-D4	Midazolam-D4	Meperidine-D4	Meneridine-D4	Meperidine-D4	MDMA-D6	MDEA-D6	MDA-D5	Meneridine-D4	Conaine-D3	Lupiciulie-04	Fiunitrazepam-U/	Estazolam-D5	Doxepin-D3	Desipramine-D3	Cocaine-D3	Clomipramine-D3	Chlordiazepoxide-D5	Carbamazepine-13C6	Benzovlecconine-D8	Amitriptyline-U3	alpha-hydroxymidazolam	7-aminoflunitrazepam-D7	Name	ISTD Method
	310.2 -> 240	298.2 -> 103	298.2 -> 103	225.2 -> 107	169.1 -> 151	267.2 -> 233	351.3 -> 277	330.1 -> 276	330.1 -> 276	263.2 -> 192	249.2 -> 86.2	353.0 -> 183	289.2 -> 72.3	289.2 -> 72.3	267.2 -> 233	331.2 -> 44.3	238.2 -> 164	243.1 -> 200	330.1 -> 295	330.1 -> 295	252.2 -> 224	252 2 -> 224	252.2 -> 224	200.2 -> 166	214.2 -> 166	185 1 -> 168	252 2 -> 224	307.2 -> 185	1090.1 -> 244	321.1 -> 245	300.1 -> 272	283.2 -> 107	270.2 -> 75.3	307.2 -> 185	318.2 -> 89.2	305.1 -> 286	243.1 -> 200	298.2 -> 171	2012~2.192	346.1 -> 328	291.2 -> 138_	Transition	
	6.289	6.454	6.454	5.485	4.619	6.398	6.243	7.015	7.015	6.074	5.911	6.568	5.699	5.699	6.398	6.225	5.626	6.197	6.570	6.570	5.624	5 624	5.624	5 103	5.262	4 983	5 624	5 594	5.000 6.375	5.4/1	6.453	6.130	6.357	5.594	6.593	6.636	6.197	5.371	6 110	6.508	5.761	RT	ISTD
	174129	1692466	1692466	606305	348773	399745	234554	892889	892889	10755	737758	16652	406546	406546	399745	85016	217734	991014	355481	355481	244320	244320	244320	37519	418184	184291	244320	520520	0000571	400500	252856	481659	1165516	520520	1470902	220447	991014	-+03373 5654	4000/9	35/83/	205743	Resp.	ISTD Results

ISP Forensic Services: Toxicology Discipline

# THC and Metabolites Screen in Blood by LC-MS/MS

Extraction Date: 5-25-17 Analyst: Anne Nord

### **PRE-ANALYTIC**

Plate Exp: 6/15/2017 Stock THC plate: 0483844 Plate Lot#

- 1. Ensure all solutions are within expiration date.
  - Mobile Phase A: 10mM Amm Formate •
  - Mobile Phase B: 0.1% FA in MeOH •
  - Blank/Negative Blood: Lot 321632-1 ۰
    - Column: Phenomenex Phenyl Hexyl (4.6 x 50mm; 2.6um)
- 2. Check levels of mobile phases and needle wash and refill as necessary. Ensure waste is not full.
- Begin mobile phase flow and allow system to equilibrate for approx. 30 min. 3.

Create worklist. Data path name: 5-25-17 blood screen AM 25-26 4.

## ANALYTIC

- √ 1. Remove standards plate, blood, and samples from cold storage. Allow to reach room temperature. √ 2.
  - Add 1000 µL blood to wells of analytical (standards) plate. Mix via aspirate and dispense.
    - Blank blood for locations containing standards/QCs and internal standards
    - Sample blood for locations containing only internal standards
- Place on shaking incubator at ambient temp., 900rpm for 15 minutes. 3. Shaker ID 66759
- 4. Pipette 500µL 0.1% formic acid to all wells of standards plate.
- 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 6. Transfer 800µL of blood+acid mixture to corresponding wells of SLE+ plate.
- |~|~| |~|~| 7. Apply positive pressure for approx. 4 seconds (or until no liquid remains on top of sorbent). (Load at 85-100 PSI- Selector to the right) Pressure Manifold ID 66729
  - Wait 5 min.
  - Add 2.25mL MTBE and allow to flow under gravity for 5 minutes. (add in 3 increments of 750uL)
  - Apply positive pressure for approx. 15 seconds. (10-15 PSI- Selector to the left)
  - Add 2.25mL Hexane and allow to flow under gravity for 5 minutes. (add in 3 increments of 750uL)
  - $\frac{\checkmark}{\checkmark}$ 8.
    9.
    10.  $\frac{\checkmark}{\checkmark}$ 11.
    12.  $\frac{\checkmark}{\sim}$ 13 Apply positive pressure for approx. 15 seconds. (10-15 PSI- Selector to the left)
    - Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C. SPE Dry ID 66819
  - <del>\</del> 13. Reconstitute in 100 µL 100% MeOH and heat seal plate with foil. Place in autosampler and run worklist.

### **POST-ANALYTIC**

- Open quantitation software and create a new quantitation batch. Batch name: 525/7 (and Screen  $\sim$  1.
- _____2. Make any necessary integration changes.
- 3. For unknown samples, calculated concentration > 3ng THC, THC-OH and > 5ng Carboxy-THC +/- 2% retention time of calibrators?
- 4. Did QCs pass for each analyte? Y / N
  - Central File Packet to include: _____ LIMS Worklist: _____ Method Checklist _____ Calibration and **Control Reports**

Comments:

- 0.1% Formic Acid in water
- MTBE

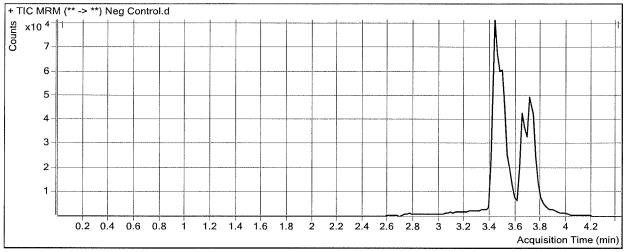
Hexane

•



Batch Data Path	D:\2017 Data\5-25-17	blood screen AM 25-2	26\QuantResults\52517 cann screen.batch.bin
Analysis Time	6/1/2017 4:30 PM	Analyst Name	ISP Tox
Report Time	6/1/2017 4:30 PM	Reporter Name	ISP Tox
Last Calib Update	6/1/2017 4:30 PM	Batch State	Processed
Analysis Info			
Acq Time	2017-05-25 16:59	Data File	Neg Control.d
Sample Type	Sample	Sample Name	Neg Control
Dilution	1	Acq Method	Screen THC 11102016.m
Position	P1-a2	Sample Info	
Inj Vol	-1	Comment	AM 26 Cannabinoid screen negative blood lot 32632-1

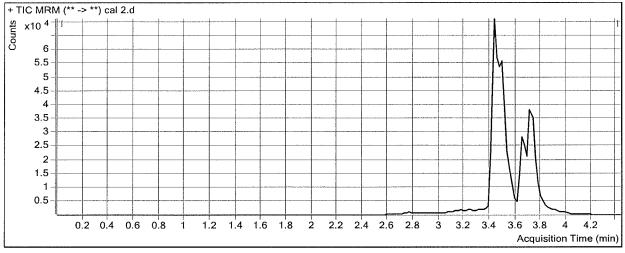
### Sample Chromatogram



Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-COOH	3.586	2450	81795	0.0299	1.1358

Batch Data Path	D:\2017 Data\5-25-17	blood screen AM 25-2	26\QuantResults\52517 cann screen.batch.bin
Analysis Time	6/1/2017 4:30 PM	Analyst Name	ISP Tox
Report Time	6/1/2017 4:30 PM	Reporter Name	ISP Tox
Last Calib Update	6/1/2017 4:30 PM	Batch State	Processed
Analysis Info			
Acq Time	2017-05-25 16:26	Data File	cal 2.d
Sample Type	Calibration	Sample Name	cal 2
Dilution	1	Acq Method	Screen THC 11102016.m
Position	P1-B1	Sample Info	
Inj Vol	-1	Comment	AM 26 Cannabinoid screen

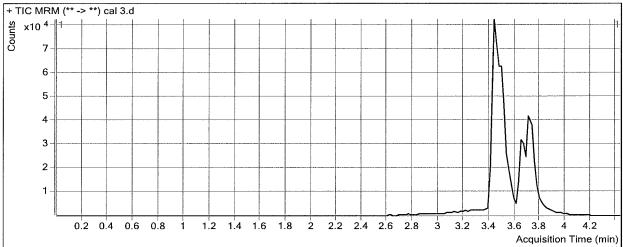
### Sample Chromatogram



Compound	RT	Response	ISTD Resp	<b>Resp Ratio</b>	Final Conc
THC-OH	3,433	15390	295076	0.0522	5.9350
THC-COOH	3.506	8736	69383	0.1259	5.3232
THC	3.720	1306	23499	0.0556	6.3339

Batch Data Path	D:\2017 Data\5-25-17	blood screen AM 25-2	26\QuantResults\52517 cann screen.batch.bin
Analysis Time	6/1/2017 4:30 PM	Analyst Name	ISP Tox
Report Time	6/1/2017 4:30 PM	Reporter Name	ISP Tox
Last Calib Update	6/1/2017 4:30 PM	Batch State	Processed
Analysis Info			
Acq Time	2017-05-25 16:33	Data File	cal 3.d
Sample Type	Calibration	Sample Name	cal 3
Dilution	1	Acq Method	Screen THC 11102016.m
Position	P1-C1	Sample Info	
Inj Vol	-1	Comment	AM 26 Cannabinoid screen

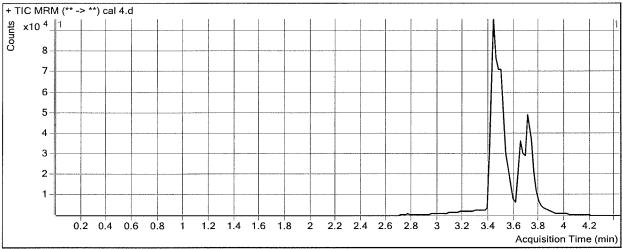
### Sample Chromatogram



Compound	RT	Response	ISTD Resp	<b>Resp</b> Ratio	Final Conc
THC-OH	3.433	30996	323630	0.0958	9,9060
THC-COOH	3.506	17747	67586	0.2626	11.2873
THC	3.720	2526	26849	0.0941	9,2457

Batch Data Path	D:\2017 Data\5-25-17	blood screen AM 25-2	26\QuantResults\52517 cann screen.batch.bin
Analysis Time	6/1/2017 4:30 PM	Analyst Name	ISP Tox
Report Time	6/1/2017 4:30 PM	Reporter Name	ISP Tox
Last Calib Update	6/1/2017 4:30 PM	Batch State	Processed
Analysis Info			
Acq Time	2017-05-25 16:39	Data File	cal 4.d
Sample Type	Calibration	Sample Name	cal 4
Dilution	1	Acq Method	Screen THC 11102016.m
Position	P1-D1	Sample Info	
Inj Vol	-1	Comment	AM 26 Cannabinoid screen

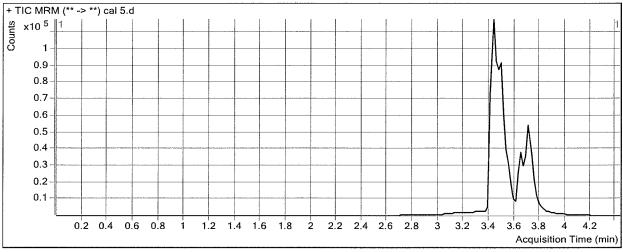
#### Sample Chromatogram



Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	3.433	78136	328873	0.2376	22.8164
THC-COOH	3.506	34483	66850	0.5158	22.3377
THC	3.720	7247	26577	0.2727	22.7599

Batch Data Path	D:\2017 Data\5-25-17 blood screen AM 25-26\QuantResults\52517 cann screen.batch.bin				
Analysis Time	6/1/2017 4:30 PM	Analyst Name	ISP Tox		
Report Time	6/1/2017 4:30 PM	Reporter Name	ISP Tox		
Last Calib Update	6/1/2017 4:30 PM	Batch State	Processed		
Analysis Info					
Acq Time	2017-05-25 16:46	Data File	cal 5.d		
Sample Type	Calibration	Sample Name	cal 5		
Dilution	1	Acq Method	Screen THC 11102016.m		
Position	P1-E1	Sample Info			
Inj Vol	-1	Comment	AM 26 Cannabinoid screen		

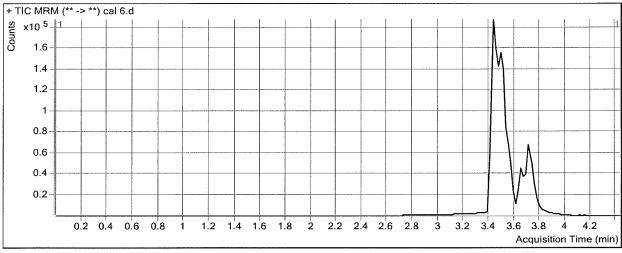
### Sample Chromatogram



Compound	RT	Response	ISTD Resp	<b>Resp Ratio</b>	Final Conc
THC-OH	3.433	163605	350981	0.4661	43.6232
THC-COOH	3.506	71875	71060	1.0115	43.9658
THC	3.720	15420	27247	0.5660	44.9488

Batch Data Path	D:\2017 Data\5-25-17 blood screen AM 25-26\QuantResults\52517 cann screen.batch.bin				
Analysis Time	6/1/2017 4:30 PM	Analyst Name	ISP Tox		
Report Time	6/1/2017 4:30 PM	Reporter Name	ISP Tox		
Last Calib Update	6/1/2017 4:30 PM	Batch State	Processed		
Analysis Info					
Acq Time	2017-05-25 16:53	Data File	cal 6.d		
Sample Type	Calibration	Sample Name	cal 6		
Dilution	1	Acq Method	Screen THC 11102016.m		
Position	P1-F1	Sample Info			
Inj Vol	-1	Comment	AM 26 Cannabinoid screen		

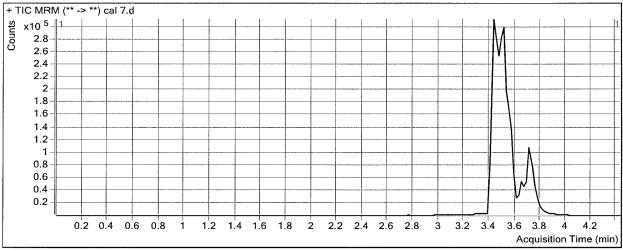
### Sample Chromatogram



Compound	RT	Response	ISTD Resp	<b>Resp Ratio</b>	Final Conc
THC-OH	3.433	430689	392567	1.0971	101.0659
THC-COOH	3.506	194269	83865	2.3164	100.9104
THC	3,720	39870	32340	1.2329	95,4058

Batch Data Path	D:\2017 Data\5-25-17 blood screen AM 25-26\QuantResults\52517 cann screen.batch.bin				
Analysis Time	6/1/2017 4:30 PM	Analyst Name	ISP Tox		
Report Time	6/1/2017 4:30 PM	Reporter Name	ISP Tox		
Last Calib Update	6/1/2017 4:30 PM	Batch State	Processed		
Analysis Info					
Acq Time	2017-05-25 17:06	Data File	cal 7.d		
Sample Type	Calibration	Sample Name	cal 7		
Dilution	1	Acq Method	Screen THC 11102016.m		
Position	P1-G1	Sample Info			
Inj Vol	-1	Comment	AM 26 Cannabinoid screen		

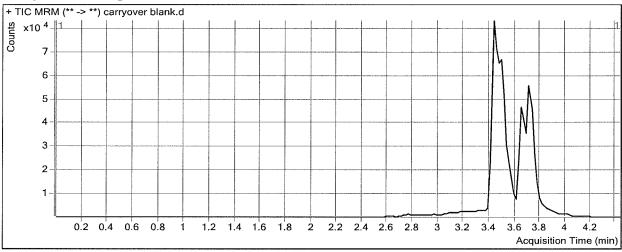
### Sample Chromatogram



Compound	RT	Response	ISTD Resp	<b>Resp Ratio</b>	<b>Final Conc</b>
THC-OH	3.433	1078501	384336	2.8061	256.6535
THC-COOH	3.506	528980	90046	5.8746	256.1756
THC	3.720	119312	34830	3.4256	261.3059

Batch Data Path	D:\2017 Data\5-25-17 blood screen AM 25-26\QuantResults\52517 cann screen.batch.bin				
Analysis Time	6/1/2017 4:30 PM	Analyst Name	ISP Tox		
Report Time	6/1/2017 4:30 PM	Reporter Name	ISP Tox		
Last Calib Update	6/1/2017 4:30 PM	Batch State	Processed		
Analysis Info					
Acq Time	2017-05-25 17:12	Data File	carryover blank.d		
Sample Type	Sample	Sample Name	carryover blank		
Dilution	1	Acq Method	Screen THC 11102016.m		
Position	P1-A2	Sample Info			
Inj Vol	-1	Comment	AM 26 Cannabinoid screen		

### Sample Chromatogram

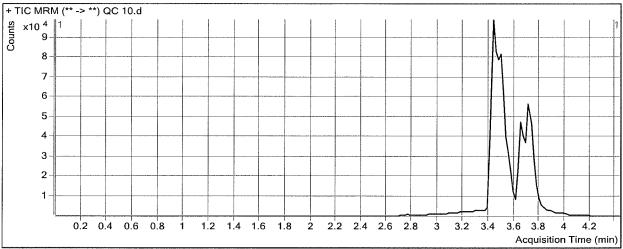


Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-COOH	3.586	2330	95656	0.0244	0.8916



Batch Data Path	D:\2017 Data\5-25-17 blood screen AM 25-26\QuantResults\52517 cann screen.batch.bin				
Analysis Time	6/1/2017 4:30 PM	Analyst Name	ISP Tox		
Report Time	6/1/2017 4:30 PM	Reporter Name	ISP Tox		
Last Calib Update	6/1/2017 4:30 PM	Batch State	Processed		
Analysis Info					
Acq Time	2017-05-25 17:19	Data File	QC 10.d		
Sample Type	QC	Sample Name	QC 10		
Dilution	1	Acq Method	Screen THC 11102016.m		
Position	P1-A3	Sample Info			
Inj Vol	-1	Comment	AM 26 Cannabinoid screen		

### Sample Chromatogram



Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	3.433	38651	427993	0.0903	9.4083
THC-COOH	3.506	25408	106320	0.2390	10.2571
THC	3.720	3764	37244	0.1011	9.7747

# ISP Forensics Calibration Curve Report

Batch Data Path D:\2017 Data\5-25-17 blood screen AM 25-26\QuantResults\52517 cann screen.batch.bin

Last Calib Update

6/1/2017 4:30 PM

Analyst Name

ISP TOX

Target Compound ТНС-ОН Internal Standard THC-OH-d3 THC-OH - 6 Levels, 6 Levels Used, 6 Points, 6 Points Used, 1 QCs 3 - y = 0.010984 * x - 0.013037 75 - R^2 = 0.99603554 Relative Responses 2.75 Type:Linear, Origin:Ignore, Weight:1/x 2.5 2.25 2 1.75 1.5 1.25 1 0.75 0.5 0.25 0 Ó 20 40 60 80 100 120 140 160 180 200 220 240 260 Concentration (ng/ml)

Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
cal 2	2		5	5.9	118.7
cal 3	3	$\square$	10	9.9	99.1
QC 10	3	$\square$	10	9.4	94.1
cal 4	4		25	22.8	91.3
cal 5	5	$\square$	50	43.6	87.2
cal 6	6	Ø	100	101.1	101.1
cal 7	7	$\square$	250	256.7	102.7



# ISP Forensics Calibration Curve Report

Batch Data Path D:\2017 Data\5-25-17 blood screen AM 25-26\QuantResults\52517 cann screen.batch.bin

Last Calib Update

6/1/2017 4:30 PM

Analyst Name

ISP TOX

Target Compound ТНС-СООН Internal Standard ТНС-СООН-d9 THC-COOH - 6 Levels, 6 Levels Used, 6 Points, 6 Points Used, 1 QCs y = 0.022917 * x + 0.003921 R*2 = 0.99606147 Type:Linear, Origin:Ignore, Weight:1/x-Relative Responses 6-5.5 5 4.5 4 3.5 3 2.5 2 1.5 1 0.5 0 80 ò 20 40 60 100 120 140 160 180 200 220 240 260 Concentration (ng/ml)

Sample	Level	Enabled	Exp Conc	<b>Final Conc</b>	Accuracy
cal 2	2		5	5.3	106.5
cal 3	3	$\square$	10	11.3	112.9
QC 10	3	$\square$	10	10.3	102.6
cal 4	4	Ø	25	22.3	89.4
cal 5	5	$\square$	50	44.0	87.9
cal 6	6	$\square$	100	100.9	100.9
cal 7	7		250	256.2	102.5

# ISP Forensics Calibration Curve Report

Batch Data Path D:\2017 Data\5-25-17 blood screen AM 25-26\QuantResults\52517 cann screen.batch.bin

Last Calib Update

6/1/2017 4:30 PM

Analyst Name

ISP TOX

Target Compound THC Internal Standard THC-d3 THC - 6 Levels, 6 Levels Used, 6 Points, 6 Points Used, 1 QCs Relative Responses Type:Linear, Origin:Ignore, Weight:1/x 3 2.5 2 1.5 1 0.5 0 60 80 100 140 Ó 20 40 120 160 180 200 220 240 260 Concentration (ng/ml)

Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
cal 2	2	$\square$	5	6.3	126.7
cal 3	3	$\square$	10	9.2	92.5
QC 10	3	$\square$	10	9.8	97.7
cal 4	4	$\square$	25	22.8	91.0
cal 5	5	$\square$	50	44.9	89.9
cal 6	6	$\square$	100	95.4	95.4
cal 7	7	$\square$	250	261.3	104.5

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