

Worklist: 2762

<u>LAB_CASE</u>	<u>ITEM</u>	<u>TASK_ID</u>	<u>DESCRIPTION</u>	
C2018-2001	1	128981	AM 25/AM 26 Blood MultiDrug/THC Screen by L	
C2018-2001	2	130141	AM 25/AM 26 Blood MultiDrug/THC Screen by L	
C2018-2001	3	130139	AM 25/AM 26 Blood MultiDrug/THC Screen by L	
C2018-2060	1	128604	AM 25/AM 26 Blood MultiDrug/THC Screen by L	
C2018-2076	2	128814	AM 25/AM 26 Blood MultiDrug/THC Screen by L	
C2018-2089	1	128955	AM 25/AM 26 Blood MultiDrug/THC Screen by L	
C2018-2090	1	130605	AM 25/AM 26 Blood MultiDrug/THC Screen by L	
C2018-2098	1	129152	AM 25/AM 26 Blood MultiDrug/THC Screen by L	
C2018-2101	1	129194	AM 25/AM 26 Blood MultiDrug/THC Screen by L	
C2018-2103	2	129202	AM 25/AM 26 Blood MultiDrug/THC Screen by L	
C2018-2113	1	129298	AM 25/AM 26 Blood MultiDrug/THC Screen by L	
C2018-2135	1	129484	AM 25/AM 26 Blood MultiDrug/THC Screen by L	
C2018-2163	1	129879	AM 25/AM 26 Blood MultiDrug/THC Screen by L	
C2018-2172	1	129931	AM 25/AM 26 Blood MultiDrug/THC Screen by L	
C2018-2182	1	130369	AM 25/AM 26 Blood MultiDrug/THC Screen by L	

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# AM# 25: Multi-Drug Screen in Blood by LC-MS/MS

Extraction Date: 10/30/2018

Analyst: Britany Wylie

Plate lot#: 05152007

Plate Expiration: 10/18/2018

**Mobile phase A:** 10mM Amm Form  
0.5M Ammonium Hydroxide

**Mobile phase B:** 0.1% Formic Acid in MeOH  
Ethyl Acetate LC Methanol

**Blank Blood Lot:** 18G207D7

**Column:** Phenomenex Phenyl Hexyl (4.6x50mm, 2.6um)

**LCMS-QQQ ID:** 62340

## Pre-Analytic:

- 1. Check levels of mobile phases and needle wash refill as needed. Ensure waste is not full.
- 2. Ensure correct column is installed and begin mobile phase flow allow to equilibrate ~ 30 minutes.
- 3. Create worklist: Data Path Name: 103018 am 25-26 103018  
BW

## Analytic:

- 1. Remove standards, plate, controls, and samples from cold storage. Allow to reach room temperature.
- 2. Pipette **250µL blood (calibrated pipette) Pipette ID: 1926134** in wells of analytical (standards) plate.
- 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. *Shaker ID: 66759*
- 4. Pipette **250µL 0.5M ammonium hydroxide** in wells of analytical plate.
- 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 6. Transfer **300µL of blood+base** mixture to corresponding wells of SLE+ plate.
- 7. Apply positive pressure for approx. 10-15 seconds (or until no liquid remains on top of sorbent).  
*(Load at 85-100 PSI- Selector to the right) Manifold ID: 66792*
- 8. Wait 5 minutes.
- 9. Add **900uL ethyl acetate**.
- 10. Wait 5 minutes.
- 11. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left)*.
- 12. Add **900uL ethyl acetate**.
- 13. Wait 5 minutes.
- 14. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left)*.
- 15. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C.  
*SPE Dry ID: 66819*
- 16. Reconstitute in **100µL 100% LC MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

## Post-Analytic

- 1. Open quantitation software and create a new quantitation batch.  
Batch Name: \_\_\_\_\_ Worklist path: 103018 AM 25-26
- 2. Make necessary changes to integration limits
- 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. > 1/3 the response of administrative control.
- 4. Did all QCs pass for each analyte? Y / N \_\_\_\_\_
- 5. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: no hydrocodone & phentermine - not evaluated  
OK BW

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**Idaho State Police  
Forensic Services  
Toxicology Discipline**

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**Request for Departure from an Analytical Method**

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Date of Request

10/22/18

Analytical Method

AM 25 multidrug screen

Deviation

The expiration date listed for the current batch of Cayman ToxBlox extraction plates (Batch # 0515207) is October 18, 2018. I am issuing a deviation to allow for the use of the remaining plates. The controls will be used to evaluate if the plate is working as intended.

The deviation will remain in effect until December 18, 2018. The allowance of expired plates will be addressed in the next method revision.

*Celena Shrum*

Date: 10/22/2018

Celena Shrum

Toxicology Program Discipline Leader

*BS*

Toxicology AM method 25 external prep information  
working solution 10000 ng/ml in meoh Hydromorphone, Hydrocodone, Nortriptyline, Sertraline  
Stock solution 1mg/ml 100 ul each in 9600ul meOH  
Ppd 4/23/18 Exp: 4/23/19 lot 42318 by Amn

Drug	lot	expiration
Hydromorphone	FE04101502	6/1/2020
Hydrocodone	FE09091505	9/1/2020
nortriptyline	FN06191503	8/1/2020
sertraline	FN01081501	3/1/2020

AM 25 control 100 ul working solution (42318) in 9900 ul neg blood  
ppd 04/23/18 exp 4/23/19 lot 42318 neg blood lot 17120718 by Amn

Concentration 100ng/ml hydrocodone, nortriptyline, sertraline, hydromorphone

Compound Method		p1 negative		p1 negative Results			Qualifier 1 M...		Qualifier 1 Re...		ISTD Method		ISTD Results	
Name	Transition	Acq. Date-Time	RT	Resp.	S/N	MI	Transition	S/N	Area	Name	RT	Resp.		
6-MAM	328.2 -> 165...	10/30/2018 2:14 PM					328.2 -> 211...			6-MAM-D6	5.319	31013		
7-aminoclonazepam	286.1 -> 121...	10/30/2018 2:14 PM					286.1 -> 222...			7-Aminoclonazepam-D4	5.590	78369		
Buprenorphine	468.3 -> 55.1	10/30/2018 2:14 PM					468.3 -> 101...			Buprenorphine-D4	7.283	1798...		
Benzoyllecgonine	290.1 -> 168...	10/30/2018 2:14 PM					290.1 -> 105...			Benzoyllecgonine-D8	5.365	4616		
Metoprolol	268.2 -> 116...	10/30/2018 2:14 PM					268.2 -> 56.3			Noroxycodone-D3	5.017	72513		
a-hydroxyalprazolam	325.1 -> 297...	10/30/2018 2:14 PM					325.1 -> 215...			a-hydroxyalprazolam-D5	6.358	26229		
alpha-PVP	232.2 -> 91.0	10/30/2018 2:14 PM					309.2 -> 77.1			alpha-PVP-d8	5.863	1520...		
Alprazolam	309.1 -> 281...	10/30/2018 2:14 PM					332.1 -> 205...			Alprazolam-D5	6.464	1281...		
Amphetamine	136.1 -> 91.1	10/30/2018 2:14 PM	5.012	22761	11.43		136.1 -> 119...			Amphetamine-D11	4.911	1071...		
Cocaine	304.2 -> 182...	10/30/2018 2:14 PM					304.2 -> 105...			Cocaine-D3	5.833	2953...		
Bupropion	240.1 -> 184...	10/30/2018 2:14 PM					240.1 -> 131...			Bupropion-D9	6.108	1805...		
Carisoprodol	261.2 -> 176...	10/30/2018 2:14 PM					261.2 -> 55.3			Carisoprodol-D7	6.126	2341...		
Citalopram	325.2 -> 109...	10/30/2018 2:14 PM					325.2 -> 282...			Citalopram-D6	6.175	4460...		
Clonazepam	316.1 -> 269...	10/30/2018 2:14 PM					316.1 -> 213...			Clonazepam-D4	6.299	16432		
Codeine	300.2 -> 215...	10/30/2018 2:14 PM					300.2 -> 165...			Codeine-D6	5.261	22159		
Cyclobenzaprine	276.2 -> 214...	10/30/2018 2:14 PM					276.2 -> 231...			Cyclobenzaprine-D3	6.530	1646...		
Dextromethorphan	272.2 -> 171...	10/30/2018 2:14 PM					272.2 -> 147...			Dextromethorphan-D3	6.267	78836		
Dextropropion	258.2 -> 157...	10/30/2018 2:14 PM					258.2 -> 133...			Dextropropion-D3	5.575	1272...		
Diazepam	285.1 -> 193...	10/30/2018 2:14 PM					285.1 -> 153...			Diazepam-D5	6.670	95962		
Dihydrocodeine	302.2 -> 198...	10/30/2018 2:14 PM					302.2 -> 128...			Dihydrocodeine-D6	5.036	70720		
Diphenhydramine	256.2 -> 167...	10/30/2018 2:14 PM					256.2 -> 152...			Diphenhydramine-D3	6.188	5990...		
Doxylamine	271.2 -> 182...	10/30/2018 2:14 PM					271.2 -> 167...			Doxylamine-D5	5.818	4863...		
EDDP	279.2 -> 235...	10/30/2018 2:14 PM					279.2 -> 250...			EDDP-D3	6.143	23357		
Fentanyl	337.2 -> 105...	10/30/2018 2:14 PM					337.2 -> 188...			Fentanyl-D5	6.561	5947...		
Fluoxetine	310.1 -> 44.3	10/30/2018 2:14 PM					310.1 -> 148...			Fluoxetine-D6	6.361	5788...		
Hydrocodone	300.2 -> 198...	10/30/2018 2:14 PM					300.2 -> 128...			Hydrocodone-D6	5.505	1175...		
Hydromorphone	286.2 -> 184...	10/30/2018 2:14 PM					286.2 -> 157...			Hydromorphone-D6	4.778	50443		
Ketamine	238.1 -> 125...	10/30/2018 2:14 PM					238.1 -> 220...			Ketamine-D4	6.108	2574...		
Mirtazapine	266.2 -> 195...	10/30/2018 2:14 PM					266.2 -> 72.3			Tramadol-13C-D3	5.594	5566...		
Mirtagynine	399.2 -> 238...	10/30/2018 2:14 PM					399.2 -> 174...			Tramadol-13C-D3	5.594	5566...		
Meprobamate	219.1 -> 158...	10/30/2018 2:14 PM					219.1 -> 97.1			Meprobamate-D7	5.660	86247		
Methadone	310.2 -> 265...	10/30/2018 2:14 PM					310.2 -> 105...			Methadone-D9	6.442	3369...		
Methamphetamine	150.1 -> 91.1	10/30/2018 2:14 PM	5.132	18725	2.51		150.1 -> 119...	2.36	781...	Methamphetamine-D11	5.092	2184...		
Morphine	286.2 -> 201...	10/30/2018 2:14 PM					286.2 -> 165...			Morphine-D6	4.497	2785		
Norbuprenorphine	414.3 -> 101...	10/30/2018 2:14 PM					414.3 -> 57.3			Norbuprenorphine-D3	6.009	20547		
Nordiazepam	271.1 -> 140...	10/30/2018 2:14 PM					271.1 -> 208...			Nordiazepam-D5	6.512	17563		
Norfentanyl	233.2 -> 84.2	10/30/2018 2:14 PM					233.2 -> 55.3			Norfentanyl-D5	5.455	3924...		
Norhydrocodone	286.2 -> 199...	10/30/2018 2:14 PM					286.2 -> 171...			Norhydrocodone-D3	5.102	46665		
Noroxycodone	302.1 -> 284...	10/30/2018 2:14 PM					302.1 -> 186...			Noroxycodone-D3	5.017	72513		
O-desmethyl-tramadol	250.2 -> 58.3	10/30/2018 2:14 PM					250.2 -> 42.3			O-desmethyl-tramadol...	5.047	5127...		
Oxazepam	287.1 -> 240...	10/30/2018 2:14 PM					287.1 -> 288...			Oxazepam-D5	6.365	39549		
Oxycodone	316.2 -> 298...	10/30/2018 2:14 PM					316.2 -> 241...			Oxycodone-D6	5.218	1500...		
Oxymorphone	302.1 -> 284...	10/30/2018 2:14 PM					302.1 -> 227...			Oxymorphone-D3	4.471	1410...		
Phentermine	150.1 -> 65.2	10/30/2018 2:14 PM					150.1 -> 133...			Phentermine-D5	5.254	3144...		
Promethazine	285.1 -> 86.2	10/30/2018 2:14 PM					285.1 -> 71.3			Promethazine-D3	6.650	9173...		
Quetiapine	384.2 -> 253...	10/30/2018 2:14 PM					384.2 -> 221...			Quetiapine-D8	6.659	2420...		
Sepraline	306.1 -> 158...	10/30/2018 2:14 PM					306.1 -> 275...			Sepraline-D3	6.688	1120...		
Temazepam	301.1 -> 255...	10/30/2018 2:14 PM					301.1 -> 283...			Temazepam-D5	6.486	1584...		

not evaluated

Compound Method		p1 negative				p1 negative Results				Qualifier 1 M...			Qualifier 1 Re...			ISTD Method		ISTD Results	
Name	Transition	Acq. Date-Time	RT	Resp.	S/N	MI	Transition	S/N	Area	MI	S/N	Area	MI	Name	RT	Resp.			
Tramadol	264.2 -> 58.3	10/30/2018 2:14 PM					264.2 -> 43.3							Tramadol-13C-D3	5.594	5566...			
Trazodone	372.2 -> 176...	10/30/2018 2:14 PM					372.2 -> 148...							Trazodone-D6	6.823	6875...			
Venlafaxine	278.2 -> 58.3	10/30/2018 2:14 PM					278.2 -> 260...							Venlafaxine-D6	5.919	5022...			
Zolpidem	308.2 -> 235...	10/30/2018 2:14 PM					308.2 -> 263...							Zolpidem-D6	6.402	6853...			

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Compound Method		p1 external control		p1 external control Results			Qualifier 1 M...		Qualifier 1 Results			ISTD Method		ISTD Results	
Name	Transition	Acq. Date-Time	RT	Resp.	S/N	MI	Transition	S/N	Area	MI	Name	RT	Resp.		
6-MAM	328.2 -> 165...	10/30/2018 2:33 PM					328.2 -> 211...				6-MAM-D6	5.319	37917		
7-aminoclonazepam	286.1 -> 121...	10/30/2018 2:33 PM					286.1 -> 222...				7-Aminoclonazepam-D4	5.590	96778		
Buprenorphine	468.3 -> 55.1	10/30/2018 2:33 PM					468.3 -> 101...				Buprenorphine -D4	7.303	221892		
Benzoyllecgonine	290.1 -> 168...	10/30/2018 2:33 PM					290.1 -> 105...				Benzoyllecgonine-D8	5.365	4079		
Metoprolol	268.2 -> 116...	10/30/2018 2:33 PM					268.2 -> 56.3				Noroxycodone-D3	5.017	81723		
a-hydroxylprazolam	325.1 -> 297...	10/30/2018 2:33 PM					325.1 -> 215...				a-hydroxylprazolam-D5	6.358	31585		
alpha-PVP	232.2 -> 91.0	10/30/2018 2:33 PM					232.2 -> 77.1				alpha-PVP-d8	5.843	176576		
Alprazolam	309.1 -> 281...	10/30/2018 2:33 PM					309.1 -> 205...				Alprazolam-D5	6.464	145183		
Amphetamine	136.1 -> 91.1	10/30/2018 2:33 PM	5.012	29842	29.27		136.1 -> 119...				Amphetamine-D11	4.911	145668		
Cocaine	304.2 -> 182...	10/30/2018 2:33 PM					304.2 -> 105...				Amphetamine-D3	5.833	362326		
Bupropion	240.1 -> 184...	10/30/2018 2:33 PM					240.1 -> 131...				Cocaine-D3	6.108	186911		
Carisoprodol	261.2 -> 176...	10/30/2018 2:33 PM					261.2 -> 55.3				Bupropion-D9	6.126	249595		
Citalopram	325.2 -> 109...	10/30/2018 2:33 PM					325.2 -> 262...				Carisoprodol-D7	6.175	567415		
Clonazepam	316.1 -> 269...	10/30/2018 2:33 PM					316.1 -> 213...				Citalopram-D6	6.299	20638		
Codeine	300.2 -> 215...	10/30/2018 2:33 PM	5.563	6780	37.54		300.2 -> 165...	89.05	18003		Clonazepam-D4	5.261	26099		
Cyclobenzaprine	276.2 -> 214...	10/30/2018 2:33 PM					276.2 -> 231...				Codeine-D6	6.530	186690		
Dextromethorphan	272.2 -> 171...	10/30/2018 2:33 PM					272.2 -> 147...				Cyclobenzaprine-D3	6.267	100515		
Dextropropion	258.2 -> 157...	10/30/2018 2:33 PM					258.2 -> 133...				Dextromethorphan-D3	5.575	163775		
Diazepam	285.1 -> 193...	10/30/2018 2:33 PM					285.1 -> 153...				Dextropropion-D5	6.670	114860		
Dihydrocodeine	302.2 -> 198...	10/30/2018 2:33 PM					302.2 -> 128...				Diazepam-D5	5.016	83307		
Diphenhydramine	256.2 -> 167...	10/30/2018 2:33 PM					256.2 -> 152...				Dihydrocodeine-D6	6.188	700120		
Doxylamine	271.2 -> 182...	10/30/2018 2:33 PM					271.2 -> 167...				Diphenhydramine-D3	5.818	554150		
EDDP	279.2 -> 235...	10/30/2018 2:33 PM					279.2 -> 250...				Doxylamine-D5	6.143	23291		
Fentanyl	337.2 -> 105...	10/30/2018 2:33 PM					337.2 -> 188...				EDDP-D3	6.561	756879		
Fluoxetine	310.1 -> 44.3	10/30/2018 2:33 PM					310.1 -> 148...				Fentanyl-D5	6.361	742222		
Hydrocodone	300.2 -> 198...	10/30/2018 2:33 PM	5.548	227514	Infinity		300.2 -> 128...	Infinity	1091...		Fluoxetine-D6	5.505	140837		
Hydromorphone	286.2 -> 184...	10/30/2018 2:33 PM	4.840	163691	113.31		286.2 -> 157...	108.36	1088...		Hydrocodone-D6	4.778	57124		
Ketamine	238.1 -> 125...	10/30/2018 2:33 PM					238.1 -> 220...				Hydromorphone-D6	6.108	302816		
Mirtazapine	266.2 -> 195...	10/30/2018 2:33 PM					266.2 -> 72.3				Ketamine-D4	5.594	682172		
Mitragynine	399.2 -> 238...	10/30/2018 2:33 PM					399.2 -> 174...				Tramadol-13C-D3	5.594	682172		
Meprobamate	219.1 -> 158...	10/30/2018 2:33 PM					219.1 -> 97.1				Tramadol-13C-D3	5.660	102578		
Methadone	310.2 -> 265...	10/30/2018 2:33 PM					310.2 -> 105...				Meprobamate-D7	6.442	425216		
Methamphetamine	150.1 -> 91.1	10/30/2018 2:33 PM	5.132	39175	6.63		150.1 -> 119...	2.32	11561		Methadone-D9	5.092	295851		
Morphine	286.2 -> 201...	10/30/2018 2:33 PM					286.2 -> 165...				Methamphetamine-D11	4.497	3997		
Norbuprenorphine	414.3 -> 101...	10/30/2018 2:33 PM					414.3 -> 57.3				Morphine-D6	6.009	24981		
Nordiazepam	271.1 -> 140...	10/30/2018 2:33 PM					271.1 -> 208...				Norbuprenorphine-D3	6.512	18088		
Norfentanyl	233.2 -> 84.2	10/30/2018 2:33 PM					233.2 -> 55.3				Nordiazepam-D5	5.455	487885		
Nerhydrocodone	286.2 -> 199...	10/30/2018 2:33 PM					286.2 -> 171...				Norfentanyl-D5	5.102	52826		
Noroxycodone	302.1 -> 284...	10/30/2018 2:33 PM					302.1 -> 186...				Nerhydrocodone-D3	5.017	81723		
O-desmethyl-tramadol	250.2 -> 58.3	10/30/2018 2:33 PM					250.2 -> 42.3				Noroxycodone-D3	5.047	587359		
Oxazepam	287.1 -> 240...	10/30/2018 2:33 PM					287.1 -> 268...				O-desmethyl-tramadol...	6.365	46664		
Oxycodone	316.2 -> 298...	10/30/2018 2:33 PM					316.2 -> 241...				Oxazepam-D5	5.218	170389		
Oxymorphone	302.1 -> 284...	10/30/2018 2:33 PM					302.1 -> 227...				Oxycodone-D6	4.471	151533		
Phentermine	150.1 -> 65.2	10/30/2018 2:33 PM					150.1 -> 133...				Oxymorphone-D3	5.254	399782		
Promethazine	285.1 -> 86.2	10/30/2018 2:33 PM					285.1 -> 71.3				Phentermine-D5	6.650	11274...		
Quetiapine	384.2 -> 253...	10/30/2018 2:33 PM					384.2 -> 221...				Promethazine-D3	6.659	300079		
Sertraline	306.1 -> 158...	10/30/2018 2:33 PM	6.689	434547	2126.15		306.1 -> 275...	71620....	3848...		Quetiapine-D8	6.688	141831		
Temazepam	301.1 -> 255...	10/30/2018 2:33 PM					301.1 -> 283...				Sertraline-D3	6.486	176722		

not evaluated

Compound Method		p1 external control			p1 external control Results			Qualifier 1 M...			Qualifier 1 Results			ISTD Method		ISTD Results	
Name	Transition	Acq. Date-Time	RT	Resp.	S/N	MI	Transition	S/N	Area	MI	Name	RT	Resp.				
Tramadol	264.2 -> 58.3	10/30/2018 2:33 PM				F	264.2 -> 43.3			F	Tramadol-13C-D3	5.594	682172				
Trazodone	372.2 -> 176...	10/30/2018 2:33 PM				F	372.2 -> 148...			F	Trazodone-D6	6.823	878124				
Venlafaxine	278.2 -> 58.3	10/30/2018 2:33 PM				F	278.2 -> 260...			F	Venlafaxine-D6	5.919	594934				
Zolpidem	308.2 -> 235...	10/30/2018 2:33 PM				F	308.2 -> 263...			F	Zolpidem-D6	6.402	814977				

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Compound Method		p1 cal 1-1a				p1 cal 1-1a Results				Qualifier 1 M...				Qualifier 1 Results				ISTD Method		ISTD Results	
Name	Transition	Acq. Date-Time	RT	Resp.	S/N	MI	Transition	S/N	MI	Area	S/N	MI	Name	RT	Resp.						
6-MAM	328.2 -> 165...	10/30/2018 1:54 PM	5.380	1240	263.79	328.2 -> 211...	4.54	954	6-MAM-D6	5.339	35778										
7-aminoclonazepam	286.1 -> 121...	10/30/2018 1:54 PM	5.612	19709	3398.67	286.1 -> 222...	560.01	12161	7-Aminoclonazepam-D4	5.590	75730										
Buprenorphine	468.3 -> 55.1	10/30/2018 1:54 PM	7.324	57598	135.99	468.3 -> 101...	76.15	6971	Buprenorphine -D4	7.303	248061										
Benzoyllecgonine	290.1 -> 168...	10/30/2018 1:54 PM	5.406	11506	296.06	290.1 -> 105...	136.77	7728	Benzoyllecgonine-D8	5.385	3962										
Metoprolol	268.2 -> 116...	10/30/2018 1:54 PM	5.594	14168	4264.76	268.2 -> 56.3	51.18	12267	Noroxycodone-D3	5.037	83239										
a-hydroxylprazolam	325.1 -> 297...	10/30/2018 1:54 PM	6.379	5076	40.84	325.1 -> 215...	39.57	3438	a-hydroxylprazolam-D5	6.379	26411										
alpha-PVP	232.2 -> 91.0	10/30/2018 1:54 PM	5.926	45248	197.07	232.2 -> 77.1	Infinity	16104	alpha-PVP-d8	5.863	198744										
Alprazolam	309.1 -> 281...	10/30/2018 1:54 PM	6.465	34030	163.86	309.1 -> 205...	164.61	35096	Alprazolam-D5	6.464	141984										
Amphetamine	136.1 -> 91.1	10/30/2018 1:54 PM	4.972	145901	107.43	136.1 -> 119...	128.61	69647	Amphetamine-D11	4.931	136357										
Cocaine	304.2 -> 182...	10/30/2018 1:54 PM	5.874	82695	141.88	304.2 -> 105...	4254.82	19845	Cocaine-D3	5.853	353320										
Bupropion	240.1 -> 184...	10/30/2018 1:54 PM	6.169	51752	Infinity	240.1 -> 131...	7367.57	30407	Bupropion-D9	6.128	246941										
Carisoprodol	261.2 -> 176...	10/30/2018 1:54 PM	6.147	37469	215.56	261.2 -> 55.3	41.76	36679	Carisoprodol-D7	6.126	262384										
Citalopram	325.2 -> 109...	10/30/2018 1:54 PM	6.196	121575	172.42	325.2 -> 262...	87.14	30789	Citalopram-D6	6.175	576879										
Clonazepam	316.1 -> 269...	10/30/2018 1:54 PM	6.320	13241	3554.54	316.1 -> 213...	23.58	3206	Clonazepam-D4	6.319	18663										
Codeine	300.2 -> 215...	10/30/2018 1:54 PM	5.344	6545	12.57	300.2 -> 165...	131.15	6147	Codeine-D6	5.281	25785										
Cyclobenzaprine	276.2 -> 214...	10/30/2018 1:54 PM	6.552	48418	409.29	276.2 -> 231...	60.91	16324	Cyclobenzaprine-D3	6.530	232891										
Dextromethorphan	272.2 -> 171...	10/30/2018 1:54 PM	6.268	22366	91.04	272.2 -> 147...	3016.02	18872	Dextromethorphan-D3	6.267	114958										
Dextropropriphan	258.2 -> 157...	10/30/2018 1:54 PM	5.596	26215	163.06	258.2 -> 133...	425.68	18014	Dextropropriphan-D3	5.595	164506										
Diazepam	285.1 -> 193...	10/30/2018 1:54 PM	6.691	25542	69.05	285.1 -> 153...	1229.92	18777	Diazepam-D5	6.670	108005										
Dihydrocodeine	302.2 -> 198...	10/30/2018 1:54 PM	5.079	16701	83.58	302.2 -> 128...	18.38	12638	Dihydrocodeine-D6	5.036	83905										
Diphenhydramine	256.2 -> 167...	10/30/2018 1:54 PM	6.209	145508	261.28	256.2 -> 152...	69.05	34215	Diphenhydramine-D3	6.188	827047										
Doxylamine	271.2 -> 182...	10/30/2018 1:54 PM	5.839	115763	59.58	271.2 -> 167...	85.05	89925	Doxylamine-D5	5.818	615919										
EDDP	279.2 -> 235...	10/30/2018 1:54 PM	6.163	79247	139.70	279.2 -> 250...	27.72	25106	EDDP-D3	6.163	33783										
Fentanyl	337.2 -> 105...	10/30/2018 1:54 PM	6.561	15626	25.24	337.2 -> 188...	2369.47	11756	Fentanyl-D5	6.561	752755										
Fluoxetine	310.1 -> 44.3	10/30/2018 1:54 PM	6.362	149872	Infinity	310.1 -> 148...	30.80	5208	Fluoxetine-D6	6.361	753015										
Hydrocodone	300.2 -> 198...	10/30/2018 1:54 PM	5.569	22157	16.59	300.2 -> 128...	Infinity	11206	Hydrocodone-D6	5.505	142124										
Hydromorphone	286.2 -> 184...	10/30/2018 1:54 PM	4.860	16743	25.45	286.2 -> 157...	37.12	11810	Hydromorphone-D6	4.798	53484										
Ketamine	238.1 -> 125...	10/30/2018 1:54 PM	6.129	74233	116.73	238.1 -> 220...	13.83	26903	Ketamine-D4	6.128	318023										
Mirtazapine	266.2 -> 195...	10/30/2018 1:54 PM	6.534	69217	69.82	266.2 -> 72.3	139.25	41672	Tramadol-13C-D3	5.614	665463										
Mitragynine	399.2 -> 238...	10/30/2018 1:54 PM	6.558	19219	249.53	399.2 -> 174...	10169...	49843	Tramadol-13C-D3	5.614	665463										
Meprobamate	219.1 -> 158...	10/30/2018 1:54 PM	5.681	18334	89.95	219.1 -> 97.1	69.29	14862	Meprobamate-D7	5.660	98065										
Methadone	310.2 -> 265...	10/30/2018 1:54 PM	6.464	75006	278.49	310.2 -> 105...	224.50	75162	Methadone-D9	6.463	480712										
Methamphetamine	150.1 -> 91.1	10/30/2018 1:54 PM	5.153	102496	8.48	150.1 -> 119...	Infinity	36157	Methamphetamine-D11	5.112	284431										
Morphine	286.2 -> 201...	10/30/2018 1:54 PM	4.558	3882	35.30	286.2 -> 165...	16.36	3438	Morphine-D6	4.517	4634										
Norbuprenorphine	414.3 -> 101...	10/30/2018 1:54 PM	6.029	5772	35.87	414.3 -> 57.3	27.09	4080	Norbuprenorphine-D3	6.009	25408										
Nordiazepam	271.1 -> 140...	10/30/2018 1:54 PM	6.553	7348	54.03	271.1 -> 208...	17.73	4002	Nordiazepam-D5	6.532	19877										
Norfentanyl	233.2 -> 84.2	10/30/2018 1:54 PM	5.496	106551	164.03	233.2 -> 55.3	52.96	36785	Norfentanyl-D5	5.475	491679										
Norhydrocodone	286.2 -> 199...	10/30/2018 1:54 PM	5.423	1681	14.85	286.2 -> 171...	1.18	404	Norhydrocodone-D3	5.123	54687										
Noroxycodone	302.1 -> 284...	10/30/2018 1:54 PM	5.038	11922	11.81	302.1 -> 186...	19.99	6638	Noroxycodone-D3	5.037	83239										
O-desmethyl-tramadol	250.2 -> 58.3	10/30/2018 1:54 PM	5.068	129753	281.71	250.2 -> 42.3	58.68	7810	O-desmethyl-tramadol-...	5.068	616487										
Oxazepam	287.1 -> 240...	10/30/2018 1:54 PM	6.386	8142	1848.59	287.1 -> 268...	5.73	4075	Oxazepam-D5	6.365	39701										
Oxycodone	316.2 -> 298...	10/30/2018 1:54 PM	5.279	34551	55.51	316.2 -> 241...	50.55	9891	Oxycodone-D6	5.218	181608										
Oxymorphone	302.1 -> 284...	10/30/2018 1:54 PM	4.534	33335	428.17	302.1 -> 227...	43.70	8315	Oxymorphone-D3	4.492	169163										
Phentermine	150.1 -> 65.2	10/30/2018 1:54 PM	5.295	25619	Infinity	150.1 -> 133...	Infinity	745	Phentermine-D5	5.274	375889										
Promethazine	285.1 -> 86.2	10/30/2018 1:54 PM	6.691	205589	56298...	285.1 -> 71.3	78.53	41485	Promethazine-D3	6.650	12325...										
Quetiapine	384.2 -> 253...	10/30/2018 1:54 PM	6.701	206147	1372.32	384.2 -> 221...	42429...	1114...	Quetiapine-D8	6.680	291918										
Sertraline	306.1 -> 158...	10/30/2018 1:54 PM	6.689	28939	Infinity	306.1 -> 275...	4586.97	27953	Sertraline-D3	6.688	149265										

not evaluated

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Compound Method		p1 cal 1-1a				p1 cal 1-1a Results				Qualifier 1 M...		Qualifier 1 Results			ISTD Method		ISTD Results	
Name	Transition	Acq. Date-Time	RT	Resp.	S/N	MI	Transition	S/N	Area	MI	Area	MI	Name	RT	Resp.			
Temazepam	301.1 -> 255...	10/30/2018 1:54 PM	6.527	13220	5159.41	1	301.1 -> 283...	9.04	6620	1	6620	1	Temazepam-D5	6.486	98572			
Tramadol	264.2 -> 58.3	10/30/2018 1:54 PM	5.615	133202	157.28	1	264.2 -> 43.3	9.58	7382	1	7382	1	Tramadol-13C-D3	5.614	665463			
Trazodone	372.2 -> 176...	10/30/2018 1:54 PM	6.864	188175	18352...	1	372.2 -> 148...	201.02	1369...	1	1369...	1	Trazodone-D6	6.843	871386			
Venlafaxine	278.2 -> 58.3	10/30/2018 1:54 PM	5.940	131110	128.81	1	278.2 -> 260...	57.43	24774	1	24774	1	Venlafaxine-D6	5.939	615394			
Zolpidem	308.2 -> 235...	10/30/2018 1:54 PM	6.424	158848	717.35	1	308.2 -> 263...	601.39	55440	1	55440	1	Zolpidem-D6	6.402	840090			

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Compound Method		p2 negative			p2 negative Results			Qualifier 1 M...			Qualifier 1 R...			ISTD Method		ISTD Results	
Name	Transition	Acq. Date-Time	RT	Resp.	S/N	MI	Transition	S/N	Area	MI	Name	RT	Resp.				
Acetylfentanyl	323.2 -> 188...	10/30/2018 2:23 PM					323.2 -> 105...				Acetylfentanyl-D5	6.367	8831...				
alpha-hydroxymidazolam	342.1 -> 324...	10/30/2018 2:23 PM					342.1 -> 203...				alpha-hydroxymidazolam-	6.426	2333...				
Amitriptyline	278.2 -> 91.2	10/30/2018 2:23 PM					278.2 -> 105...				Amitriptyline-D3	6.657	1673...				
Acetylnorfentanyl	219.1 -> 84.2	10/30/2018 2:23 PM					219.1 -> 56.3				Acetylnorfentanyl-D5	4.997	3314...				
Carbamazepine	237.1 -> 193...	10/30/2018 2:23 PM					237.1 -> 194...				Carbamazepine-13C6	6.136	7858...				
Chlordiazepoxide	300.1 -> 227...	10/30/2018 2:23 PM					300.1 -> 282...				Chlordiazepoxide-D5	6.573	1314...				
Zopiclone	389.1 -> 244...	10/30/2018 2:23 PM					389.1 -> 216...				Zopiclone-D4	6.403	1371...				
Sufentanil	387.2 -> 238...	10/30/2018 2:23 PM					387.2 -> 111...				Sufentanil-D5	6.927	6000...				
Desipramine	267.2 -> 72.3	10/30/2018 2:23 PM					267.2 -> 44.3				Desipramine-D3	6.458	6052...				
Doxepin	280.2 -> 107...	10/30/2018 2:23 PM					280.2 -> 77.2				Doxepin-D3	6.353	2747...				
Estazolam	295.1 -> 267...	10/30/2018 2:23 PM					295.1 -> 205...				Estazolam-D5	6.391	1763...				
Flunitrazepam	314.1 -> 268...	10/30/2018 2:23 PM					314.1 -> 239...				Flunitrazepam-D7	6.409	7795...				
Flurazepam	388.2 -> 315...	10/30/2018 2:23 PM					388.2 -> 317...				Zopiclone-D4	6.403	1371...				
Imipramine	281.2 -> 86.2	10/30/2018 2:23 PM					281.2 -> 58.3				Imipramine-D3	6.575	3966...				
Levamisole	205.1 -> 91.2	10/30/2018 2:23 PM					205.1 -> 178...				Sufentanil-D5	6.927	6000...				
Maprotiline	278.2 -> 91.2	10/30/2018 2:23 PM					278.2 -> 117...				Amitriptyline-D3	6.657	1673...				
MDA	180.1 -> 163...	10/30/2018 2:23 PM					180.1 -> 105...				MDA-D5	5.105	2590...				
MDEA	208.1 -> 163...	10/30/2018 2:23 PM					208.1 -> 105...				MDEA-D6	5.386	3509...				
MDMA	194.1 -> 163...	10/30/2018 2:23 PM					194.1 -> 105...				MDMA-D6	5.245	48316...				
Meperidine	248.2 -> 220...	10/30/2018 2:23 PM					248.2 -> 174...				Meperidine-D4	5.891	98963...				
Methylphenidate	234.2 -> 84.2	10/30/2018 2:23 PM					234.2 -> 56.3				Meperidine-D4	5.891	98963...				
Midazolam	326.1 -> 223...	10/30/2018 2:23 PM					326.1 -> 249...				Midazolam-D4	6.609	2182...				
Normeperidine	234.1 -> 42.3	10/30/2018 2:23 PM					234.1 -> 160...				Normeperidine-D4	5.750	1140...				
7-Aminoflunitrazepam	284.1 -> 135...	10/30/2018 2:23 PM					284.1 -> 93.2				7-aminoflunitrazepam-D7	5.762	1290...				
Nortriptyline	264.2 -> 91.2	10/30/2018 2:23 PM					264.2 -> 233...				Nortriptyline-D3	6.479	1383...				
Phenazepam	349.0 -> 206...	10/30/2018 2:23 PM					349.0 -> 183...				Phenazepam-D4	6.486	8198...				
Phencyclidine	244.2 -> 86.2	10/30/2018 2:23 PM					244.2 -> 91.1				Phencyclidine-D5	6.054	1355...				
Phenytol	253.1 -> 104...	10/30/2018 2:23 PM					253.1 -> 182...				Phenytol-D10	6.052	11315...				
Pseudoephedrine	166.1 -> 148...	10/30/2018 2:23 PM					166.1 -> 133...				Pseudoephedrine-D3	4.743	4160...				
Tapentadol	222.2 -> 107...	10/30/2018 2:23 PM					222.2 -> 121...				Tapentadol-D3	5.588	4935...				
Zaleplon	306.1 -> 236...	10/30/2018 2:23 PM					306.1 -> 264...				Zaleplon-D4	6.227	1430...				

Compound Method		p2 external control		p2 external control Results			Qualifier 1 M...		Qualifier 1 Results			ISTD Method		ISTD Results	
Name	Transition	Acq. Date: Time	RT	Resp.	S/N	MI	Transition	S/N	Area	MI	Name	RT	Resp.		
Acetylfentanyl	323.2 -> 188...	10/30/2018 2:43 PM					323.2 -> 105...				Acetylfentanyl-D5	6.367	10998...		
alpha-hydroxymidazolam	342.1 -> 324...	10/30/2018 2:43 PM					342.1 -> 203...				alpha-hydroxymidazolam...	6.426	282106		
Amitriptyline	278.2 -> 91.2	10/30/2018 2:43 PM					278.2 -> 105...				Amitriptyline-D3	6.657	187306		
Acetylornofentanyl	219.1 -> 84.2	10/30/2018 2:43 PM					219.1 -> 56.3				Acetylornofentanyl-D5	4.997	378775		
Carbamazepine	237.1 -> 193...	10/30/2018 2:43 PM					237.1 -> 194...				Carbamazepine-13C6	6.136	842638		
Chlordiazepoxide	300.1 -> 227...	10/30/2018 2:43 PM					300.1 -> 282...				Chlordiazepoxide-D5	6.573	146695		
Zopiclone	389.1 -> 244...	10/30/2018 2:43 PM					389.1 -> 216...				Zopiclone-D4	6.403	168368		
Sufentanil	387.2 -> 238...	10/30/2018 2:43 PM					387.2 -> 111...				Sufentanil-D5	6.927	795253		
Desipramine	267.2 -> 72.3	10/30/2018 2:43 PM					267.2 -> 44.3				Desipramine-D3	6.458	763559		
Doxepin	280.2 -> 107...	10/30/2018 2:43 PM					280.2 -> 77.2				Doxepin-D3	6.353	326865		
Estazolam	295.1 -> 267...	10/30/2018 2:43 PM					295.1 -> 205...				Estazolam-D5	6.370	200132		
Flunitrazepam	314.1 -> 268...	10/30/2018 2:43 PM					314.1 -> 239...				Flunitrazepam-D7	6.409	8521		
Flurazepam	388.2 -> 315...	10/30/2018 2:43 PM					388.2 -> 317...				Zopiclone-D4	6.403	168368		
Imipramine	281.2 -> 86.2	10/30/2018 2:43 PM					281.2 -> 58.3				Imipramine-D3	6.575	490307		
Levamisole	205.1 -> 91.2	10/30/2018 2:43 PM					205.1 -> 178...				Sufentanil-D5	6.927	795253		
Maprotiline	278.2 -> 91.2	10/30/2018 2:43 PM					278.2 -> 117...				Amitriptyline-D3	6.657	187306		
MDA	180.1 -> 163...	10/30/2018 2:43 PM					180.1 -> 105...				MDA-D5	5.105	321500		
MDEA	208.1 -> 163...	10/30/2018 2:43 PM					208.1 -> 105...				MDEA-D6	5.386	419071		
MDMA	194.1 -> 163...	10/30/2018 2:43 PM					194.1 -> 105...				MDMA-D6	5.225	57704		
Meperidine	248.2 -> 220...	10/30/2018 2:43 PM					248.2 -> 174...				Meperidine-D4	5.891	120540		
Methylphenidate	234.2 -> 84.2	10/30/2018 2:43 PM					234.2 -> 56.3				Meperidine-D4	5.891	120540		
Midazolam	326.1 -> 223...	10/30/2018 2:43 PM					326.1 -> 249...				Midazolam-D4	6.589	262983		
Normeperidine	234.1 -> 42.3	10/30/2018 2:43 PM					234.1 -> 160...				Normeperidine-D4	5.750	136351		
7-Aminoflunitrazepam	284.1 -> 135...	10/30/2018 2:43 PM					284.1 -> 93.2				7-aminoflunitrazepam-D7	5.762	153947		
Nortriptyline	264.2 -> 91.2	10/30/2018 2:43 PM	6.480	432887	Infinity		264.2 -> 233...	Infini...	3745...		Nortriptyline-D3	6.479	168444		
Phenazepam	349.0 -> 206...	10/30/2018 2:43 PM					349.0 -> 183...				Phenazepam-D4	6.465	9625		
Phencyclidine	244.2 -> 86.2	10/30/2018 2:43 PM					244.2 -> 91.1				Phencyclidine-D5	6.033	167470		
Phenytol	253.1 -> 104...	10/30/2018 2:43 PM					253.1 -> 182...				Phenytol-D10	6.032	13531		
Pseudoephedrine	166.1 -> 148...	10/30/2018 2:43 PM					166.1 -> 133...				Pseudoephedrine-D3	4.743	521960		
Tapentadol	222.2 -> 107...	10/30/2018 2:43 PM					222.2 -> 121...				Tapentadol-D3	5.588	570148		
Zaleplon	306.1 -> 236...	10/30/2018 2:43 PM					306.1 -> 264...				Zaleplon-D4	6.227	171434		

Compound Method		p2 cal 1-1b			p2 cal 1-1b Results			Qualifier 1 M...			Qualifier 1 Results			ISTD Method		ISTD Results	
Name	Transition	Acq. Date-Time	RT	Resp.	S/N	MI	Transition	S/N	Area	MI	Name	RT	Resp.				
Acetylfentanyl	323.2 -> 188...	10/30/2018 2:04 PM	6.367	11274	2957.43	323.2 -> 105...	14.18	16863	Acetylfentanyl-D5	6.367	10711...						
alpha-hydroxymidazolam	342.1 -> 324...	10/30/2018 2:04 PM	6.446	41699	287.67	342.1 -> 203...	9277	29007	alpha-hydroxymidazolam...	6.446	254885						
Amtripyline	278.2 -> 91.2	10/30/2018 2:04 PM	6.658	75591	140.04	278.2 -> 105...	58.69	37149	Amtripyline-D3	6.657	217195						
Acetylnorfentanyl	219.1 -> 84.2	10/30/2018 2:04 PM	5.019	6808	96.47	219.1 -> 56.3	55.42	2150	Acetylnorfentanyl-D5	5.018	379831						
Carbamazepine	237.1 -> 193...	10/30/2018 2:04 PM	6.157	18593	64.82	237.1 -> 194...	268.90	1758...	Carbamazepine-13C6	6.156	884606						
Chlordiazepoxide	300.1 -> 227...	10/30/2018 2:04 PM	6.573	19370	59.07	300.1 -> 282...	206.82	12598	Chlordiazepoxide-D5	6.573	156050						
Zopiclone	389.1 -> 244...	10/30/2018 2:04 PM	6.423	11642	73.68	389.1 -> 216...	33.82	6111	Zopiclone-D4	6.403	142203						
Sufentanil	387.2 -> 238...	10/30/2018 2:04 PM	6.948	17607	280.30	387.2 -> 111...	Infinity	17135	Sufentanil-D5	6.927	774244						
Desipramine	267.2 -> 72.3	10/30/2018 2:04 PM	6.459	160622	32033...	267.2 -> 44.3	718.50	85261	Desipramine-D3	6.458	779174						
Doxepin	280.2 -> 107...	10/30/2018 2:04 PM	6.374	67420	83.42	280.2 -> 77.2	30.29	22320	Doxepin-D3	6.353	353729						
Estazolam	295.1 -> 267...	10/30/2018 2:04 PM	6.392	39860	230.06	295.1 -> 205...	1472	32357	Estazolam-D5	6.391	180477						
Flunitrazepam	314.1 -> 268...	10/30/2018 2:04 PM	6.409	36997	434.68	314.1 -> 239...	124.05	12666	Flunitrazepam-D7	6.409	7765						
Flurazepam	388.2 -> 315...	10/30/2018 2:04 PM	6.586	105232	Infinity	388.2 -> 317...	241.82	23409	Zopiclone-D4	6.403	142203						
Imipramine	281.2 -> 86.2	10/30/2018 2:04 PM	6.596	194899	685.19	281.2 -> 58.3	436.45	1036...	Imipramine-D3	6.575	529597						
Levamisole	205.1 -> 91.2	10/30/2018 2:04 PM	5.447	37890	19.40	205.1 -> 178...	1920	35622	Sufentanil-D5	6.927	774244						
Maprotiline	278.2 -> 91.2	10/30/2018 2:04 PM	6.457	37169	Infinity	278.2 -> 117...	Infinity	23516	Amtripyline-D3	6.657	217195						
MDA	180.1 -> 163...	10/30/2018 2:04 PM	5.126	56294	53.43	180.1 -> 105...	21.20	37669	MDA-D5	5.105	295310						
MDEA	208.1 -> 163...	10/30/2018 2:04 PM	5.406	85184	661.56	208.1 -> 105...	98.78	66182	MDEA-D6	5.386	417428						
MDMA	194.1 -> 163...	10/30/2018 2:04 PM	5.246	95071	325.59	194.1 -> 105...	117.44	63607	MDMA-D6	5.245	55773						
Meperidine	248.2 -> 220...	10/30/2018 2:04 PM	5.912	23169	Infinity	248.2 -> 174...	90.24	14066	Meperidine-D4	5.911	132596						
Methylphenidate	234.2 -> 84.2	10/30/2018 2:04 PM	5.751	167608	983.22	234.2 -> 56.3	947.17	34925	Meperidine-D4	5.911	132596						
Midazolam	326.1 -> 223...	10/30/2018 2:04 PM	6.610	16372	149.33	326.1 -> 249...	226.03	16200	Midazolam-D4	6.609	270377						
Normeperidine	234.1 -> 42.3	10/30/2018 2:04 PM	5.752	40932	156.95	234.1 -> 160...	303.44	29053	Normeperidine-D4	5.750	138238						
7-Aminoflunitrazepam	284.1 -> 135...	10/30/2018 2:04 PM	5.783	30512	327.24	284.1 -> 93.2	208.37	10013	7-aminoflunitrazepam-D7	5.762	147196						
Nortriptyline	264.2 -> 91.2	10/30/2018 2:04 PM	6.500	44232	Infinity	264.2 -> 233...	Infinity	40534	Nortriptyline-D3	6.499	176574						
Phenazepam	349.0 -> 206...	10/30/2018 2:04 PM	6.486	27233	1595.25	349.0 -> 183...	240.68	17596	Phenazepam-D4	6.486	8474						
Phencyclidine	244.2 -> 86.2	10/30/2018 2:04 PM	6.054	36285	98.87	244.2 -> 91.1	25.14	29009	Phencyclidine-D5	6.054	197499						
Phenytol	253.1 -> 104...	10/30/2018 2:04 PM	6.073	3099	47.72	253.1 -> 182...	13.33	2600	Phenytol-D10	6.052	13570						
Pseudoephedrine	166.1 -> 148...	10/30/2018 2:04 PM	4.764	10411...	297.96	166.1 -> 133...	80.45	2055...	Pseudoephedrine-D3	4.743	530353						
Tapentadol	222.2 -> 107...	10/30/2018 2:04 PM	5.609	111117	164.77	222.2 -> 121...	290.39	40288	Tapentadol-D3	5.609	565319						
Zaleplon	306.1 -> 236...	10/30/2018 2:04 PM	6.248	42071	394.60	306.1 -> 264...	170.96	29831	Zaleplon-D4	6.227	160293						

# AM# 26: THC and Metabolites Screen in Blood by LC-MS/MS

Extraction Date: 10/30/2018

Analyst: Britany Wylie

Plate lot#: 0539904

Plate Expiration: 09/10/2019

**Mobile phase A:** 10mM Ammonium Formate  
0.1% Formic Acid in Water

**Mobile phase B:** 0.1% Formic acid in MeOH  
MTBE Hexane

**Blank Blood Lot:** 18G207D7

**Column:** Phenomenex Phenyl Hexyl (4.6x50mm: 2.6 um)

**LCMS-QQQ ID:** 62340

## Pre-Analytic:

1. Check levels of mobile phases and needle wash refill as needed. Ensure waste is not full.
2. Ensure correct column is installed and begin mobile phase flow allow to equilibrate ~ 30 minutes.
3. Create worklist: am 25-26 103018

## Analytic:

1. Remove standards, plate, controls, and samples from cold storage. Allow to reach room temperature.
2. Pipette **1000 µL blood (calibrated pipette) Pipette ID: K52558** in wells of analytical (standards) plate.
  - Blank blood for locations containing standards/QCs and internal standards
  - Sample blood for locations containing only internal standards
3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. *Shaker ID: 66759*
4. Pipette **500 µL 0.1% formic acid** in wells of analytical plate.
5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
6. Transfer **800 µL of blood+base** 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) Manifold ID: 66792*
8. Wait 5 minutes.
9. Add **2.25 mL MTBE** (add in 3 increments of 750uL).
10. Wait 5 minutes.
11. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left).*
12. Add **2.25 mL hexane** (add in 3 increments of 750uL).
13. Wait 5 minutes.
14. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left).*
15. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C.  
*SPE Dry ID: 66819*
16. Reconstitute in **100µL 100% MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

## Post-Analytic

1. Create batch and process data.  
Worklist path: 103018 AM 25-26 Batch Name: \_\_\_\_\_
2. Calculated sample concentration of 3 ng/mL or greater for THC and THC-OH, a calculated sample concentration of 10 ng/mL or greater for Carboxy-THC.
3. Retention time within +/- 2% or +/- .100 min whichever is greater of the average retention time of the calibrators.
4. Did all QCs pass for each analyte? Y / N
5. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS:

*FW*

# ISP FORENSICS - Cd'A

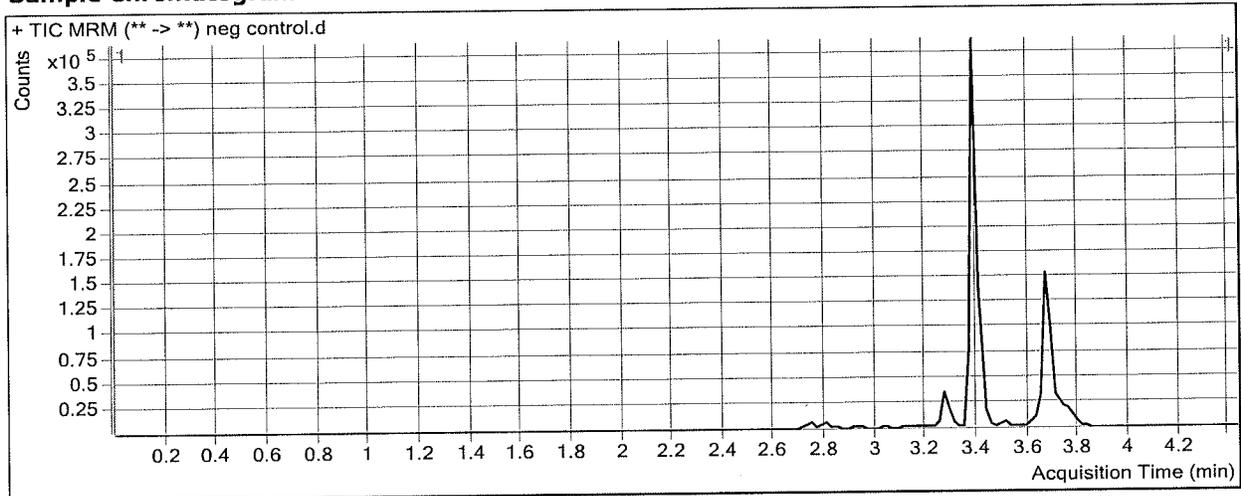
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\103018 AM 25-26\QuantResults\103018 cann screen.batch.bin  
**Analysis Time** 10/31/2018 10:22 AM **Analyst Name** ISP Tox  
**Report Time** 10/31/2018 10:26 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/31/2018 10:22 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-31 00:56 **Data File** neg control.d  
**Sample Type** Sample **Sample Name** neg control  
**Dilution** 1 **Acq Method** Screen THC 8-2017.m  
**Position** P1-A2 **Sample Info**  
**Inj Vol** -1 **Comment** Blank Blood Lot 18G207D7 AM 26 Cannabinoid screen

### Sample Chromatogram



# ISP FORENSICS - Cd'A

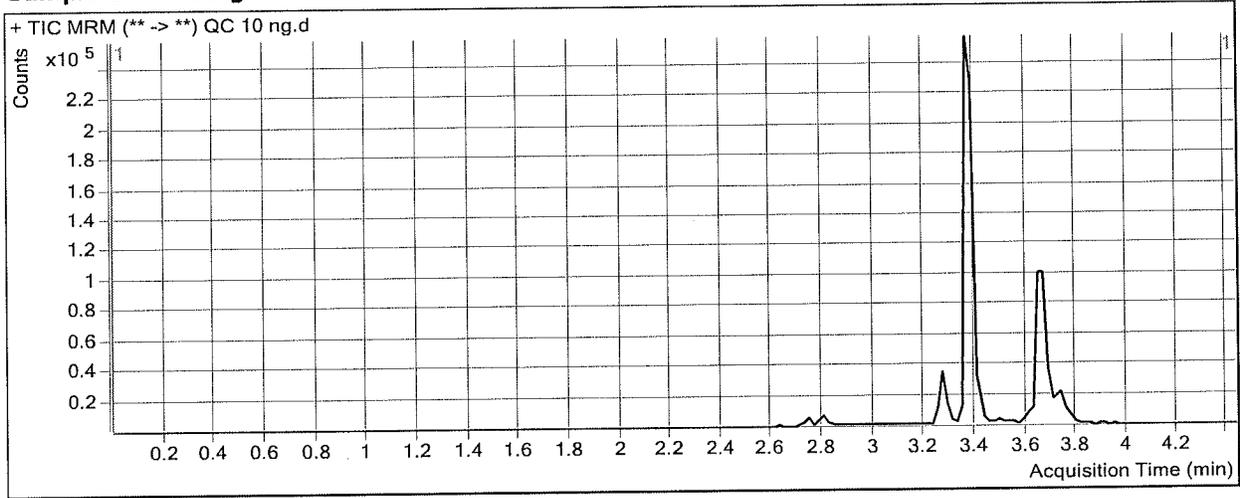
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\103018 AM 25-26\QuantResults\103018 cann screen.batch.bin  
**Analysis Time** 10/31/2018 10:22 AM **Analyst Name** ISP Tox  
**Report Time** 10/31/2018 10:26 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/31/2018 10:22 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-31 00:42 **Data File** QC 10 ng.d  
**Sample Type** QC **Sample Name** QC 10 ng  
**Dilution** 1 **Acq Method** Screen THC 8-2017.m  
**Position** P1-H1 **Sample Info**  
**Inj Vol** -1 **Comment** AM 26 Cannabinoid screen

### Sample Chromatogram



### Results

Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-COOH	3.266	9985	65703	0.1520	9.6109
THC-OH	3.392	23981	610146	0.0393	4.7803
THC	3.740	1124	24867	0.0452	5.0015

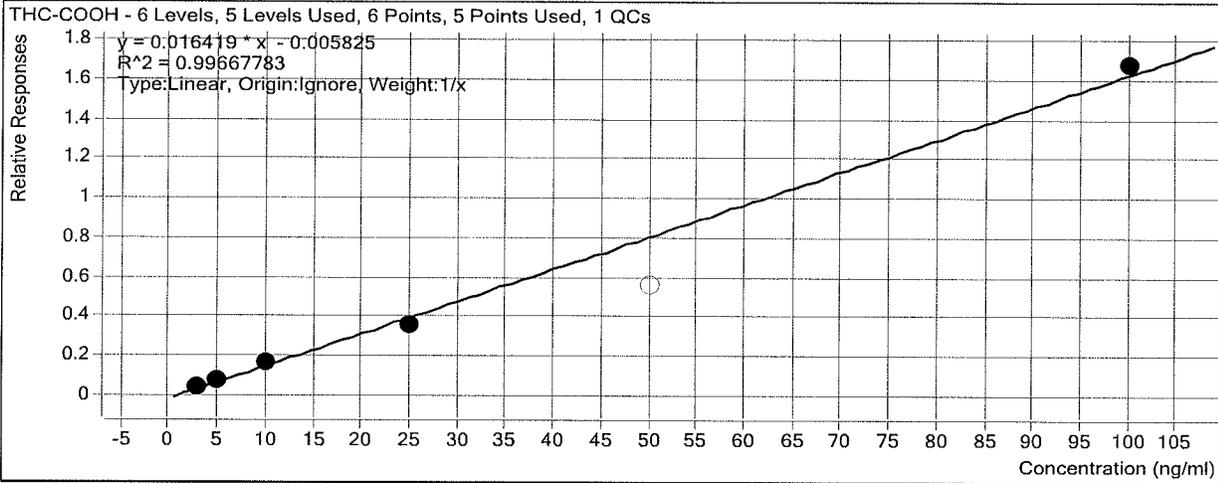
*ISP*

# ISP Forensics Calibration Curve Report

**Batch Data Path** D:\2018 Data\103018 AM 25-26\QuantResults\103018 cann screen.batch.bin

**Last Calib Update** 10/31/2018 10:22 AM      **Analyst Name** ISP TOX

**Target Compound** *THC-COOH*  
**Internal Standard** *THC-COOH-d9*



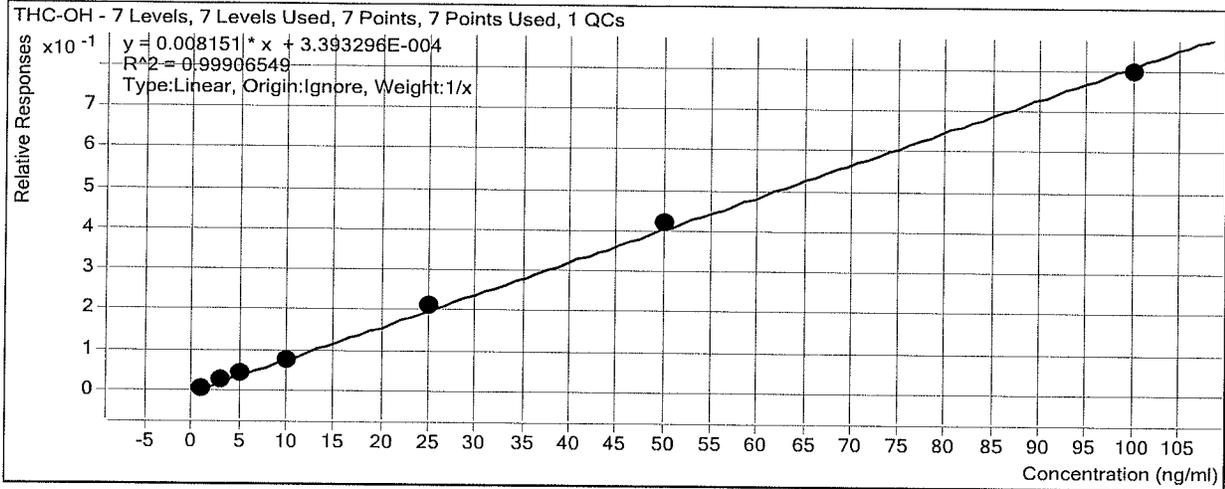
Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
cal 1 - 1ng	1	<input type="checkbox"/>	1	0.0	0.0
cal 2 - 3ng	2	<input checked="" type="checkbox"/>	3	3.3	108.4
cal 3 - 5ng	3	<input checked="" type="checkbox"/>	5	4.9	97.2
QC 10 ng	3	<input checked="" type="checkbox"/>	5	9.6	192.2
cal 4 - 10ng	4	<input checked="" type="checkbox"/>	10	10.3	102.5
cal 5 - 25ng	5	<input checked="" type="checkbox"/>	25	22.4	89.6
cal 6 - 50ng	6	<input type="checkbox"/>	50	34.7	69.5 - top of peak cutoff.
cal 7 - 100ng	7	<input checked="" type="checkbox"/>	100	102.2	102.2

# ISP Forensics Calibration Curve Report

**Batch Data Path** D:\2018 Data\103018 AM 25-26\QuantResults\103018 cann screen.batch.bin

**Last Calib Update** 10/31/2018 10:22 AM **Analyst Name** ISP TOX

**Target Compound** *THC-OH*  
**Internal Standard** *THC-OH-d3*



Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
cal 1 - 1ng	1	<input checked="" type="checkbox"/>	1	0.9	94.4
cal 2 - 3ng	2	<input checked="" type="checkbox"/>	3	3.1	102.3
cal 3 - 5ng	3	<input checked="" type="checkbox"/>	5	5.1	101.4
QC 10 ng	3	<input checked="" type="checkbox"/>	5	4.8	95.6
cal 4 - 10ng	4	<input checked="" type="checkbox"/>	10	9.7	97.1
cal 5 - 25ng	5	<input checked="" type="checkbox"/>	25	26.1	104.3
cal 6 - 50ng	6	<input checked="" type="checkbox"/>	50	51.4	102.9
cal 7 - 100ng	7	<input checked="" type="checkbox"/>	100	97.7	97.7

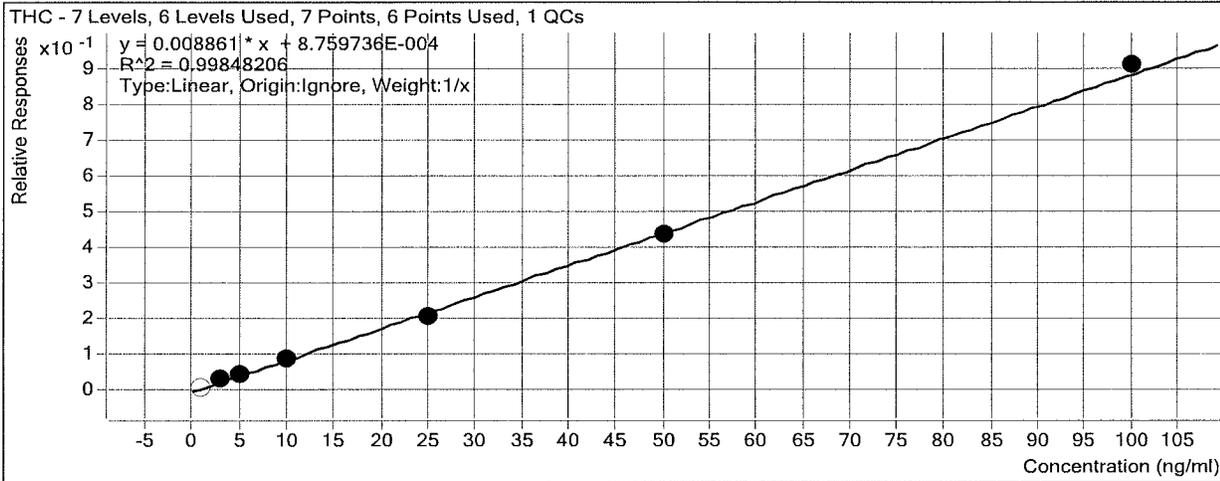
(B)

# ISP Forensics Calibration Curve Report

**Batch Data Path** D:\2018 Data\103018 AM 25-26\QuantResults\103018 cann screen.batch.bin

**Last Calib Update** 10/31/2018 10:22 AM      **Analyst Name** ISP TOX

**Target Compound** *THC*  
**Internal Standard** *THC-d3*



Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
cal 1 - 1ng	1	<input type="checkbox"/>	1	1.0	102.7
cal 2 - 3ng	2	<input checked="" type="checkbox"/>	3	3.3	108.8
cal 3 - 5ng	3	<input checked="" type="checkbox"/>	5	4.9	97.3
QC 10 ng	3	<input type="checkbox"/>	5	5.0	100.0
cal 4 - 10ng	4	<input checked="" type="checkbox"/>	10	10.0	100.1
cal 5 - 25ng	5	<input checked="" type="checkbox"/>	25	23.2	92.8
cal 6 - 50ng	6	<input checked="" type="checkbox"/>	50	49.4	98.8
cal 7 - 100ng	7	<input checked="" type="checkbox"/>	100	102.3	102.3

# ISP FORENSICS - Cd'A

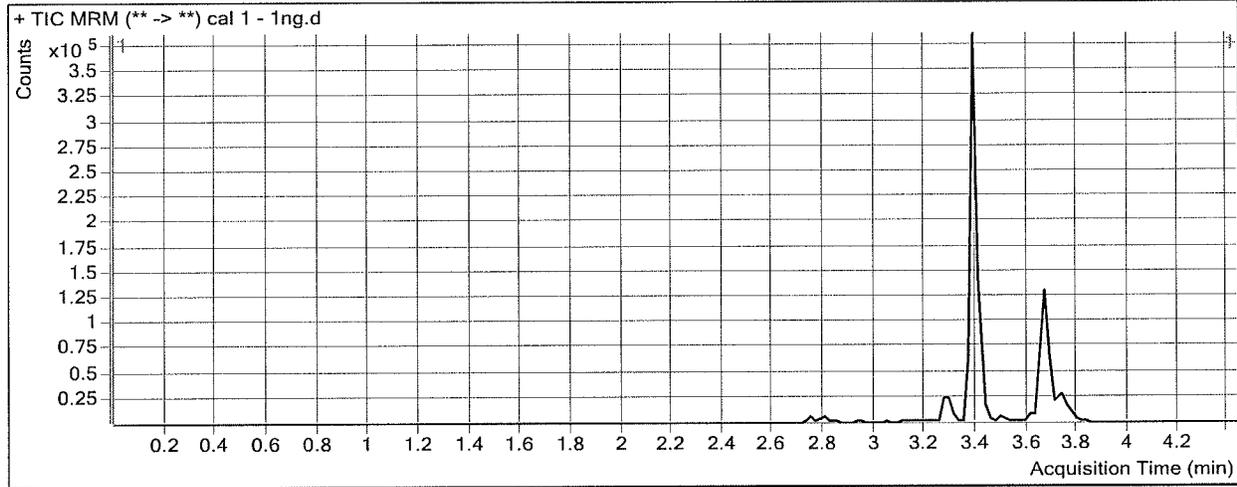
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\103018 AM 25-26\QuantResults\103018 cann screen.batch.bin  
**Analysis Time** 10/31/2018 10:22 AM **Analyst Name** ISP Tox  
**Report Time** 10/31/2018 10:26 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/31/2018 10:22 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-30 23:50 **Data File** cal 1 - 1ng.d  
**Sample Type** Calibration **Sample Name** cal 1 - 1ng  
**Dilution** 1 **Acq Method** Screen THC 8-2017.m  
**Position** p1-a1 **Sample Info**  
**Inj Vol** -1 **Comment** AM 26 Cannabinoid screen

### Sample Chromatogram



### Results

Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	3.392	5830	726030	0.0080	0.9435
THC	3.740	325	32589	0.0100	1.0270

# ISP FORENSICS - Cd'A

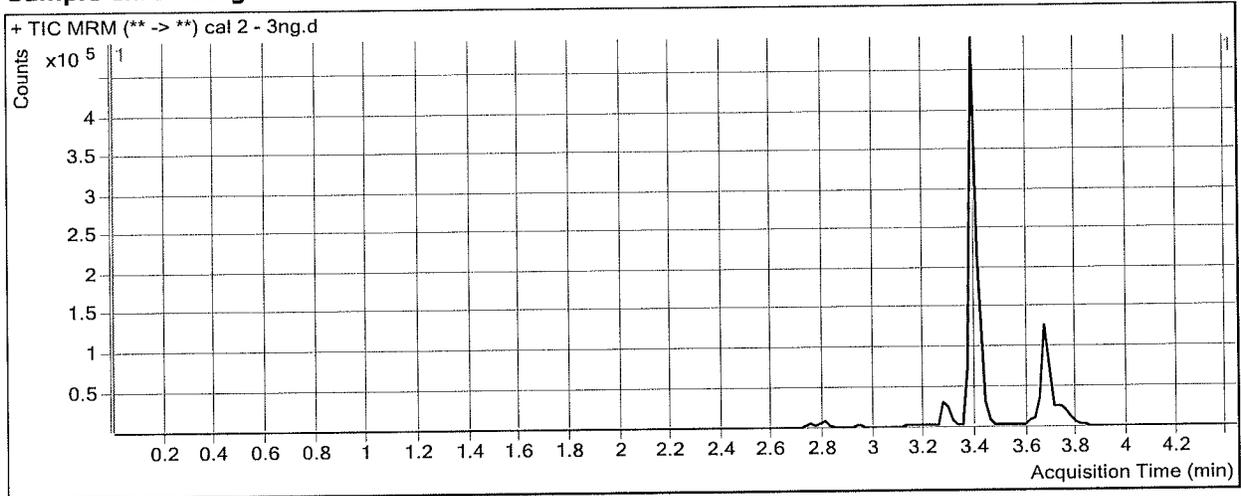
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\103018 AM 25-26\QuantResults\103018 cann screen.batch.bin  
**Analysis Time** 10/31/2018 10:22 AM **Analyst Name** ISP Tox  
**Report Time** 10/31/2018 10:26 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/31/2018 10:22 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-30 23:56 **Data File** cal 2 - 3ng.d  
**Sample Type** Calibration **Sample Name** cal 2 - 3ng  
**Dilution** 1 **Acq Method** Screen THC 8-2017.m  
**Position** P1-B1 **Sample Info**  
**Inj Vol** -1 **Comment** AM 26 Cannabinoid screen

### Sample Chromatogram



### Results

Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-COOH	3.286	4104	86252	0.0476	3.2530
THC-OH	3.392	24179	953767	0.0254	3.0685
THC	3.740	937	31456	0.0298	3.2626

# ISP FORENSICS - Cd'A

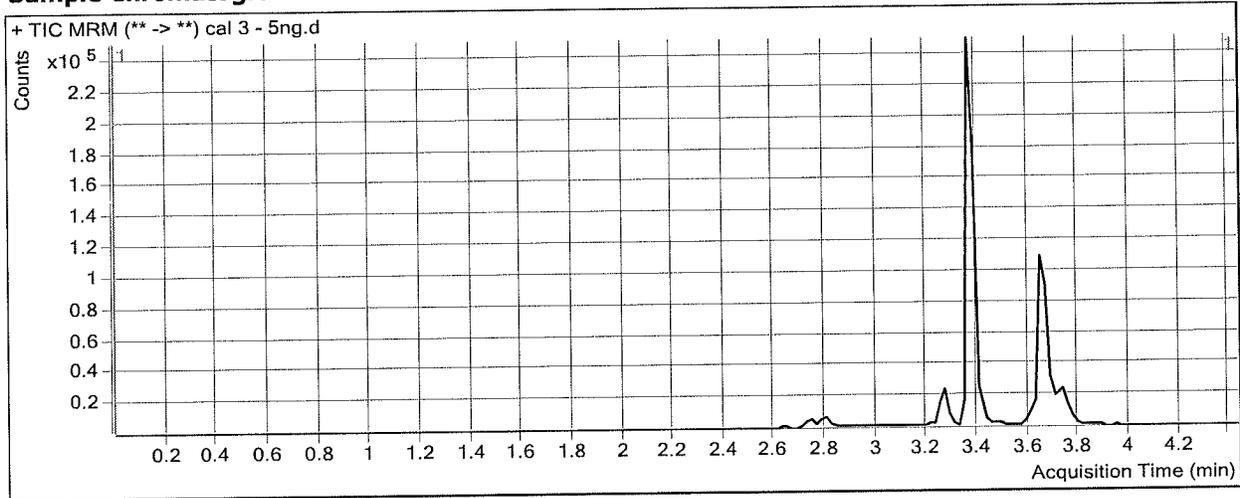
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\103018 AM 25-26\QuantResults\103018 cann screen.batch.bin  
**Analysis Time** 10/31/2018 10:22 AM **Analyst Name** ISP Tox  
**Report Time** 10/31/2018 10:26 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/31/2018 10:22 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-31 00:03 **Data File** cal 3 - 5ng.d  
**Sample Type** Calibration **Sample Name** cal 3 - 5ng  
**Dilution** 1 **Acq Method** Screen THC 8-2017.m  
**Position** p1-c1 **Sample Info**  
**Inj Vol** -1 **Comment** AM 26 Cannabinoid screen

### Sample Chromatogram



### Results

Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-COOH	3.266	4303	58151	0.0740	4.8613
THC-OH	3.372	22125	530891	0.0417	5.0714
THC	3.740	1143	25996	0.0440	4.8645

# ISP FORENSICS - Cd'A

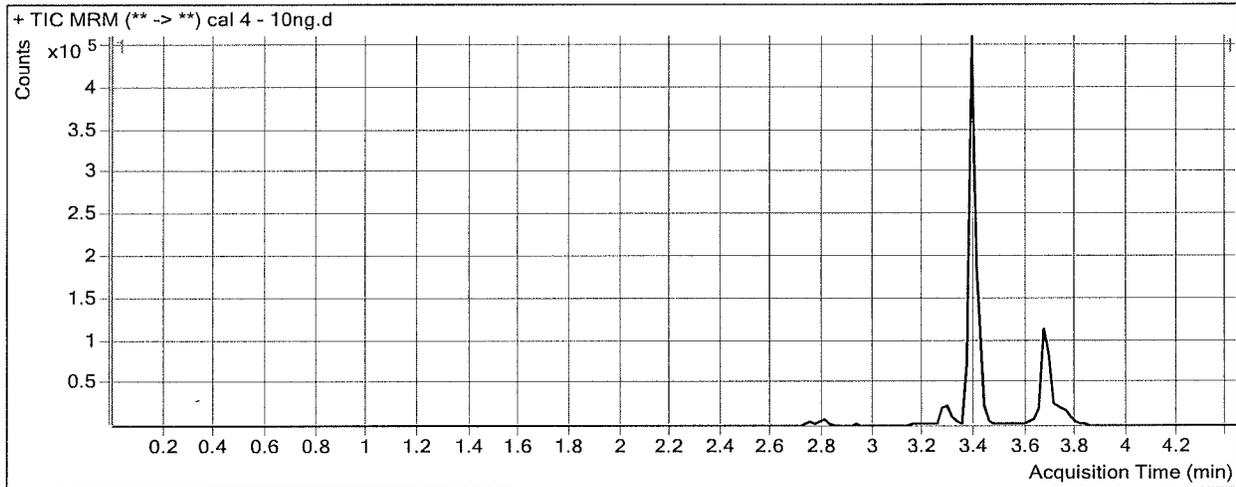
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\103018 AM 25-26\QuantResults\103018 cann screen.batch.bin  
**Analysis Time** 10/31/2018 10:22 AM **Analyst Name** ISP Tox  
**Report Time** 10/31/2018 10:26 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/31/2018 10:22 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-31 00:10 **Data File** cal 4 - 10ng.d  
**Sample Type** Calibration **Sample Name** cal 4 - 10ng  
**Dilution** 1 **Acq Method** Screen THC 8-2017.m  
**Position** P1-D1 **Sample Info**  
**Inj Vol** -1 **Comment** AM 26 Cannabinoid screen

### Sample Chromatogram



### Results

Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-COOH	3.286	10594	65176	0.1625	10.2543
THC-OH	3.392	64966	817474	0.0795	9.7083
THC	3.740	2348	26211	0.0896	10.0108

# ISP FORENSICS - Cd'A

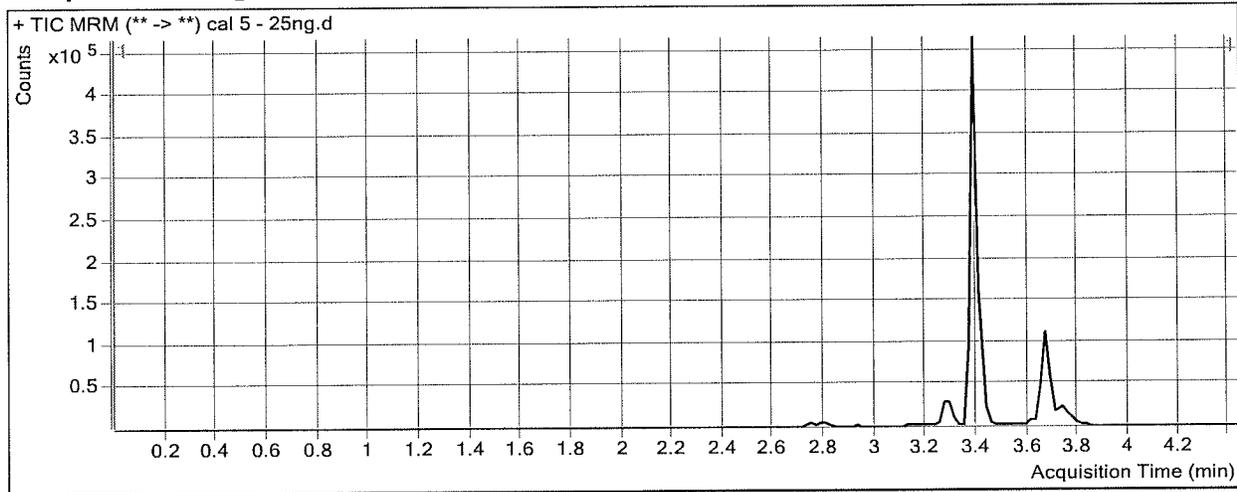
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\103018 AM 25-26\QuantResults\103018 cann screen.batch.bin  
**Analysis Time** 10/31/2018 10:22 AM **Analyst Name** ISP Tox  
**Report Time** 10/31/2018 10:26 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/31/2018 10:22 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-31 00:16 **Data File** cal 5 - 25ng.d  
**Sample Type** Calibration **Sample Name** cal 5 - 25ng  
**Dilution** 1 **Acq Method** Screen THC 8-2017.m  
**Position** p1-e1 **Sample Info**  
**Inj Vol** -1 **Comment** AM 26 Cannabinoid screen

### Sample Chromatogram



### Results

Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-COOH	3.286	22099	61087	0.3618	22.3887
THC-OH	3.392	155468	730569	0.2128	26.0661
THC	3.740	4940	23931	0.2064	23.1965

# ISP FORENSICS - Cd'A

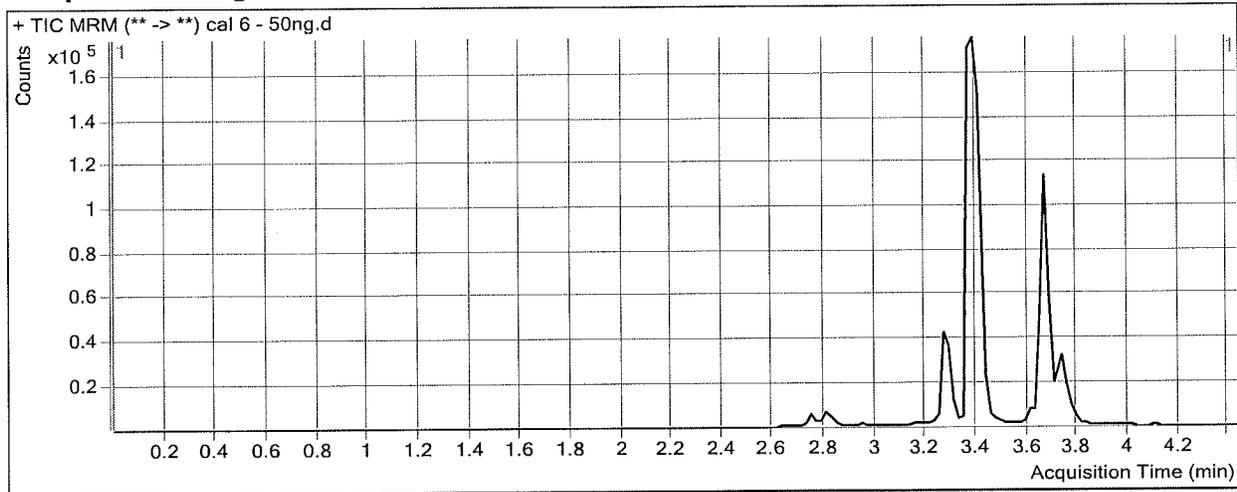
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\103018 AM 25-26\QuantResults\103018 cann screen.batch.bin  
**Analysis Time** 10/31/2018 10:22 AM **Analyst Name** ISP Tox  
**Report Time** 10/31/2018 10:26 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/31/2018 10:22 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-31 00:23 **Data File** cal 6 - 50ng.d  
**Sample Type** Calibration **Sample Name** cal 6 - 50ng  
**Dilution** 1 **Acq Method** Screen THC 8-2017.m  
**Position** P1-F1 **Sample Info**  
**Inj Vol** -1 **Comment** AM 26 Cannabinoid screen

### Sample Chromatogram



### Results

Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-COOH	3.286	37024	65565	0.5647	34.7482
THC-OH	3.412	170655	406642	0.4197	51.4452
THC	3.740	12314	28079	0.4386	49.3958

# ISP FORENSICS - Cd'A

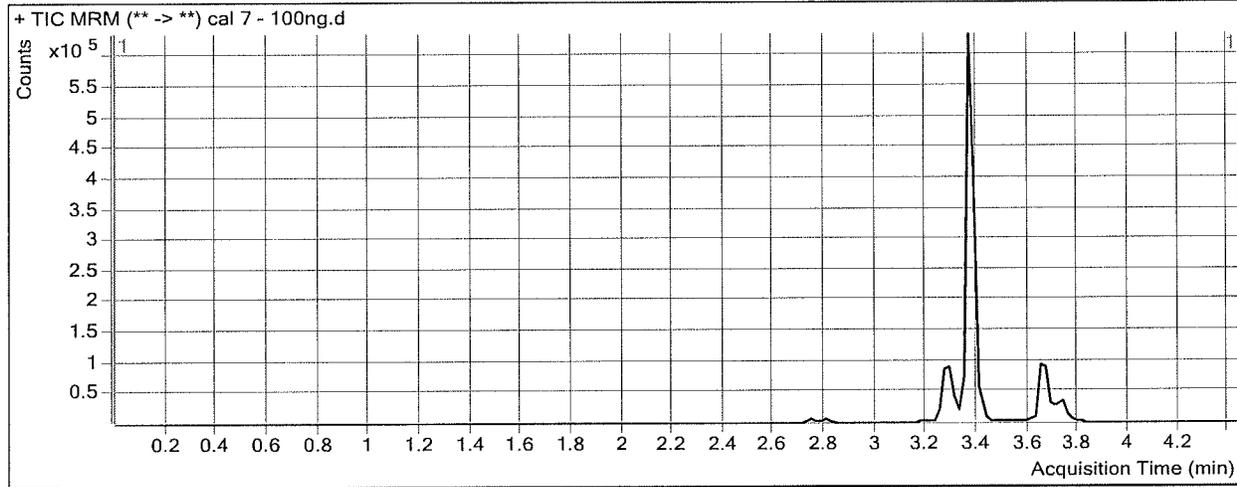
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\103018 AM 25-26\QuantResults\103018 cann screen.batch.bin  
**Analysis Time** 10/31/2018 10:22 AM **Analyst Name** ISP Tox  
**Report Time** 10/31/2018 10:26 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/31/2018 10:22 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-31 00:29 **Data File** cal 7 - 100ng.d  
**Sample Type** Calibration **Sample Name** cal 7 - 100ng  
**Dilution** 1 **Acq Method** Screen THC 8-2017.m  
**Position** p1-g1 **Sample Info**  
**Inj Vol** -1 **Comment** AM 26 Cannabinoid screen

### Sample Chromatogram



### Results

Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-COOH	3.286	171134	102299	1.6729	102.2427
THC-OH	3.372	562811	706457	0.7967	97.6970
THC	3.740	24350	26845	0.9071	102.2697

**Request for Departure from an Analytical Method**

---

Date of Request  
06/28/18

Forensic Scientist  
Anne Nord

Analytical Method  
Method 26

Type of Deviation

Minor                       Major

Departure

Allow the response from 5ng/ml for Carboxy-THC to be evaluated as positive at the analyst's discretion.

4.3 Evaluation of Results

4.3.1 Minimum Criteria:

4.3.1.1

**Analyte Administrative Threshold**

THC 3 ng/mL

Carboxy-THC 10 ng/mL

THC-OH 3 ng/mL

Calculated sample concentration of 3 ng/mL or greater for THC and THC-OH, a calculated sample concentration of 10 ng/mL or greater for Carboxy-THC.

Allow for the positive control to be prepared in house.

Rationale for Departure

AM 26 is a screening method for cannabinoids, the function of the method is to indicate if cannabinoids are present. There is a potential for a positive sample to give a response in this range in the screen.

**Discipline Leader Review**

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Departure approved- this deviation will remain in effect until the next method revision at which time the change will be made in the analytical method.

Departure Not Approved  
Comments:

  
\_\_\_\_\_  
Celena Shrum  
Toxicology Program Discipline Leader

Date: 06/28/18

*BW* 4-11-19