8/14/2018

Worklist: 2638

LAB_CASE	ITEM	TASK_ID	DESCRIPTION
M2018-3378	1	124341	AM 28 Blood Multi-Drug Quant Panel 2 by LC-Q(
P2018-1953	1	124094	AM 28 Blood Multi-Drug Quant Panel 2 by LC-Q(

AM# 28: Multi-Drug Quantitation in Blood by LC-MS/MS

Extraction Date: 08/15/18 Analyst: Sarah Pickle
Plate lot#: 0530563 Plate Expiration: 05/21/19

Mobile phase A: 5mM Amm Form + 0.01% FA **Mobile phase B:** 0.01% Formic Acid in MeOH
0.5M Ammonium Hydroxide Ethyl Acetate 20% Methanol in Water
Blank Blood Lot: 361331-1 **Column**: Agilent 120 EC-C18 (2.1x 100-4um)
LCMS-QQQ ID: 59740

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: _____

Analytic:

☒ 1. Remove standards, plate, controls, and samples from cold storage. Allow to reach room temperature.
☒ 2. Pipette **250µL blood (calibrated pipette) Pipette ID: #3** in wells of analytical (standards) plate.
☒ 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. *Shaker ID: 067105*
☒ 4. Pipette **250µL 00.5M 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: 067104*
☒ 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: 067103*
☒ 16. Reconstitute in **100µL 20% MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

Post-Analytic

☒ 1. Create batch and process data.
Worklist path: *081518 P1 P2 SP* Batch Name: *081518 MDQ P2a compounds removed*
☒ 2. Make necessary changes to integration limits
☒ 3. Integration linear and R^2 values ≥0.98 for each analyte.
☒ 4. For unknown samples and controls: response ratio within 20% of average of controls and standards, RT within +/- 5% (tramadol RT +/-2%), S/N for primary transition >10 and secondary transitions >5.
☒ 5. Did all QCs pass for each analyte? Y / N _____ Add Control data to QC tracking spreadsheet.
☒ 6. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports.

COMMENTS: *Only zopiclone, carbamazepine, midazolam, and chlordiazepoxide were evaluated in this run. Curve range limited for carbamazepine 5-500.*

Idaho State Police Forensic Services

AM #28 Blood Multi-Drug Confirmatory Analysis by LCMS-QQQ

Analyst: Sarah Pickle
Extraction Date: 08/15/18
Worklist Number: 2638

Reagent	*Lot Number*	*Expiration Date*	*Date in Service*	*Date Out of Service*	*Initials*
ToxBox Benzo/Opiate Quant Plate	0530563	5/21/19			
Negative Blood	361331-1		05/25/18		
Methanol External Control Solution	022018	02/20/19	02/20/18		
Blood External Control Solution	081518	02/20/19	08/15/18		
0.5M Ammonium Hydroxide	032918	09/29/18	03/29/18		
Formic Acid (LCMS Grade)	095180B		11/15/17		
Water (LCMS Grade)	181370		06/21/18		
Methanol (LCMS Grade)	177145		04/11/18		
Ammonium Formate (LCMS Grade)	A0287238		01/30/17		
Ammonium Hydroxide (ACS grade or better)	053200		08/03/07		
Ethyl Acetate (ACS grade or better)	100362		06/26/17		
20% LCMS Methanol in LCMS Water	081518	Make fresh	08/15/18		
5mM Ammonium Formate + 0.01% Formic Acid in Water (Mobile Phase A)	081518		08/15/18		
0.01% Formic Acid in Methanol (Mobile Phase B)	081518		08/15/18		
Needle Rinse--75% LCMS MeOH in LCMS Water	081518		08/15/18		

Methanol External Control Solution (Lot: 022018)
100 ul each 1 mg/mL stock solution in 9700 ul MeOH

Component	*Source*	*Source Lot Number*	*Expiration Date*
Methanol (LCMS)	Fisher	172516	
Zopiclone	Cerilliant	FE08291601	12/31/2021
Chlordiazepoxide	Cerilliant	FE07241502	08/31/2020
Flunitrazepam	Cerilliant	FE08051602	08/31/2021
Prepared:	02/20/18		
Prepared By:	Tamara Salazar		
Expires:	02/20/19		

Blood External Control Solution (Lot: WS081518)

50 ul of methanol external control solution was added to 9950 ul of blood.

Component	*Source*	*Source Lot Number*
Negative Blood	Hemostat	361331-1
Methanol External Control Solution		022018
Prepared:	08/15/18	
Prepared by:	Sarah Pickle	
Expires:	02/20/19	

0.5M Ammonium Hydroxide (Lot: 032918)

Component	*Source*	*Source Lot Number*
Ammonium Hydroxide (ACS grade or better)	Fisher	053200
DI Water	-	-
Prepared:	*03/29/18*	
Prepared By:	Tamara Salazar	
Expires:	*09/29/18*	

20% LCMS Methanol in LCMS Water (Lot: *Prepared Fresh*)

Component	*Source*	*Source Lot Number*
MeOH (LCMS Grade)	Fisher	177145
Water (LCMS Grade)	Fisher	181370

5mM Ammonium Formate + 0.01% Formic Acid in Water (Lot: 081518)

Component	*Source*	*Source Lot Number*
Ammonium Formate	Arcos Organics	A0287238
LCMS Water	Fisher	181370
Formic Acid	Fisher	095180B
Prepared:	08/15/18	
Prepared By:	Sarah Pickle	

0.01% Formic Acid in LCMS Methanol (Mobile Phase B) (Lot: 081518)

Component	*Source*	*Source Lot Number*
Formic Acid	Fisher	095180B
MeOH (LCMS Grade)	Fisher	172517
Prepared:	08/15/18	
Prepared By:	Sarah Pickle	

Needle Rinse (75% LCMS MeOH in LCMS Water) (Lot: 081518)

Component	*Source*	*Source Lot Number*
MeOH (LCMS Grade)	Fisher	177145
Water (LCMS Grade)	Fisher	177528
Prepared:	08/15/18	
Prepared By:	Sarah Pickle	

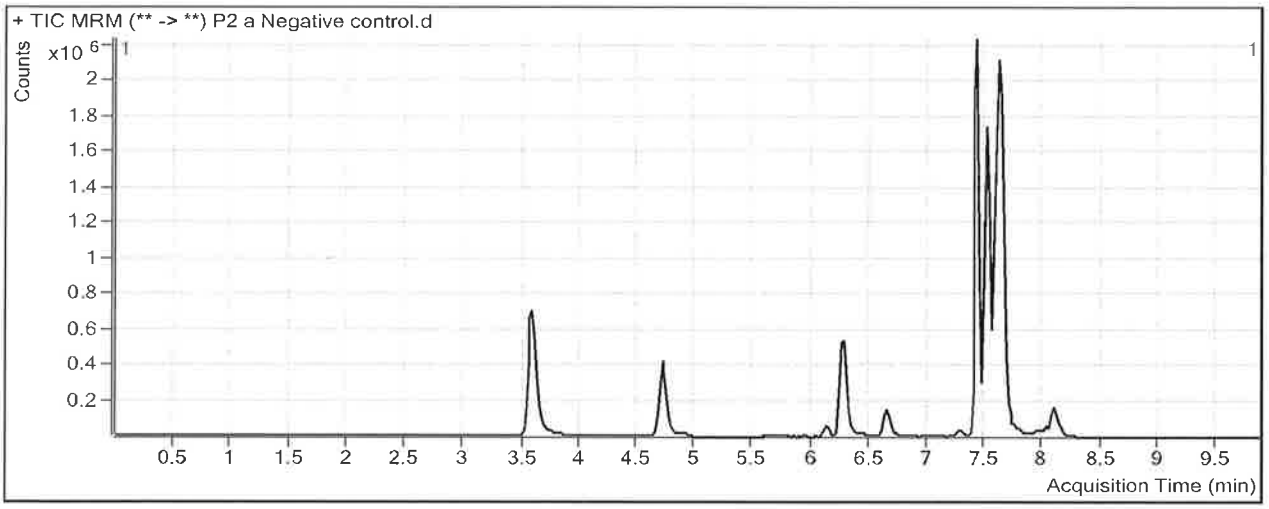
ISP FORENSICS - Pocatello Instrument # 59740
Multi-Drug Confirmatory Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.b		
Analysis Time	8/20/2018 3:20 PM	**Analyst Name**	ISPUser
Report Time	8/20/2018 3:22 PM	**Reporter Name**	ISPUser
Last Calib Update	8/20/2018 3:20 PM	**Batch State**	Processed

Analysis Info

Acq Time	2018-08-16 14:05	**Data File**	P2 a Negative control.d
Sample Type	Sample	**Sample Name**	P2 a Negative control.d
Dilution	1	**Acq Method**	MDQ Panel 2a 06-22-18.m
Position	P2-E6	**Sample Info**	
Inj Vol	-1	**Comment**	AM 28-Panel 2

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
Zopiclone	Zopiclone-D4	6.131	1127	204420	0.0055	2.7755 < 5
Midazolam	Midazolam-D4	7.585	5320	2289121	0.0023	1.1992 < 5

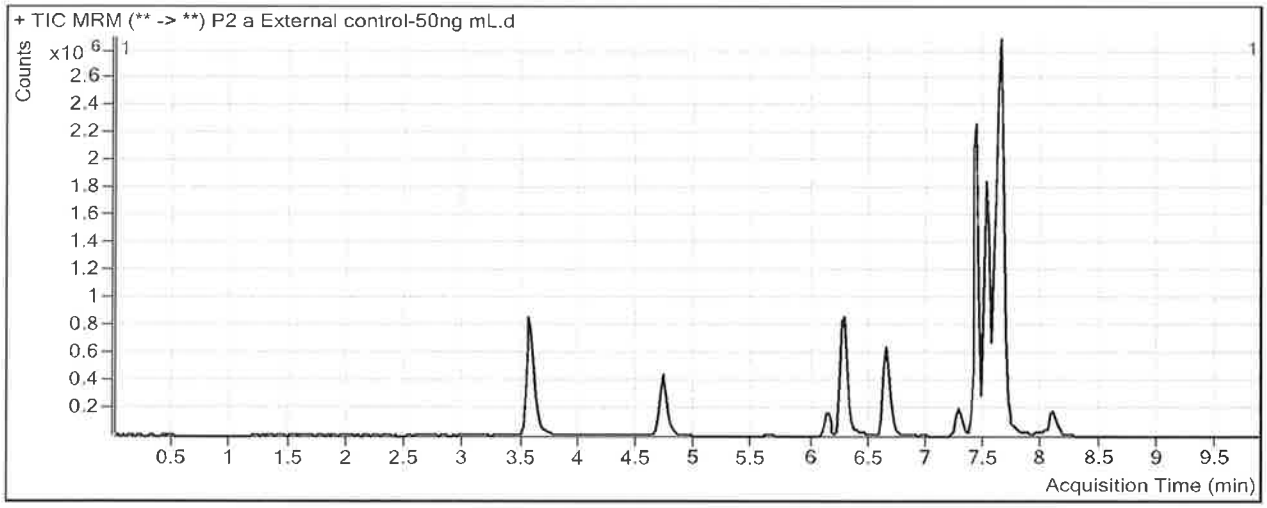
ISP FORENSICS - Pocatello Instrument # 59740
Multi-Drug Confirmatory Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.b		
Analysis Time	8/20/2018 3:20 PM	**Analyst Name**	ISPUser
Report Time	8/20/2018 3:22 PM	**Reporter Name**	ISPUser
Last Calib Update	8/20/2018 3:20 PM	**Batch State**	Processed

Analysis Info

Acq Time	2018-08-16 14:30	**Data File**	P2 a External control-50ng mL.d
Sample Type	Sample	**Sample Name**	P2 a External control-50ng mL.d
Dilution	1	**Acq Method**	MDQ Panel 2a 06-22-18.m
Position	P2-F6	**Sample Info**	
Inj Vol	-1	**Comment**	AM 28; 361331-1 + WS022018 50 ng flunitrazepam, zopiclone, chlorodia:

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
Zopiclone	Zopiclone-D4	6.131	339274	228761	1.4831	42.4431
Chlordiazepoxide	Chlordiazepoxide-D5	7.627	1263622	4312530	0.2930	60.2573

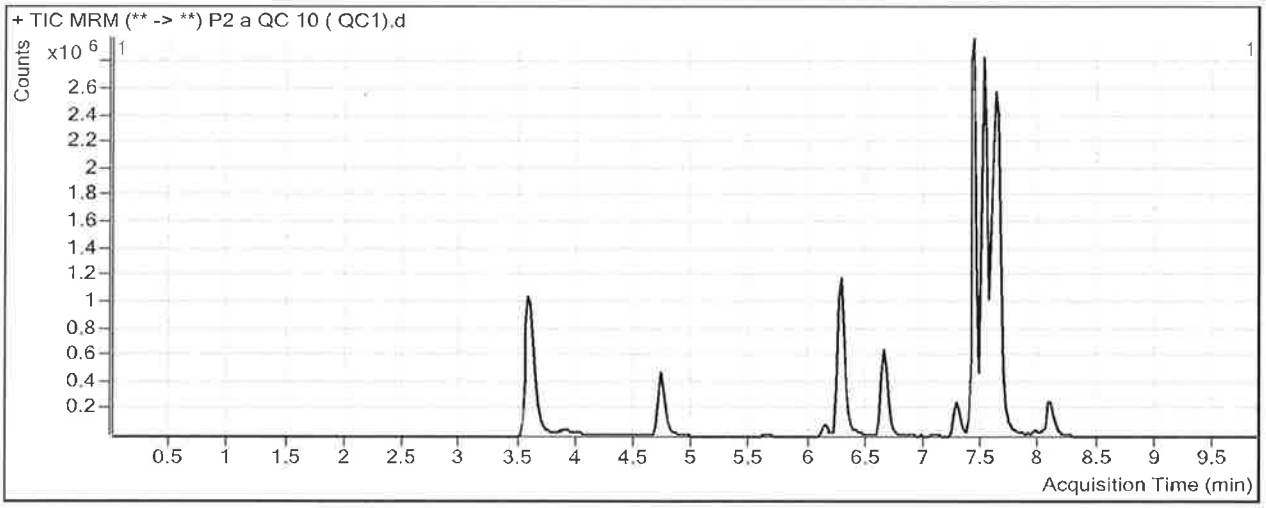
ISP FORENSICS - Pocatello Instrument # 59740
Multi-Drug Confirmatory Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.b		
Analysis Time	8/20/2018 3:20 PM	**Analyst Name**	ISPUser
Report Time	8/20/2018 3:22 PM	**Reporter Name**	ISPUser
Last Calib Update	8/20/2018 3:20 PM	**Batch State**	Processed

Analysis Info

Acq Time	2018-08-16 15:21	**Data File**	P2 a QC 10 (QC1).d
Sample Type	QC	**Sample Name**	P2 a QC 10 (QC1).d
Dilution	1	**Acq Method**	MDQ Panel 2a 06-22-18.m
Position	P2-A6	**Sample Info**	
Inj Vol	-1	**Comment**	AM 28-Panel 2

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
Zopiclone	Zopiclone-D4	6.131	73623	235867	0.3121	11.0072
Carbamazepine	Carbamazepine-13C6	7.437	1819901	7315590	0.2488	9.9078
Midazolam	Midazolam-D4	7.585	153294	2709951	0.0566	9.1212
Chlordiazepoxide	Chlordiazepoxide-D5	7.627	199649	4860486	0.0411	9.5636

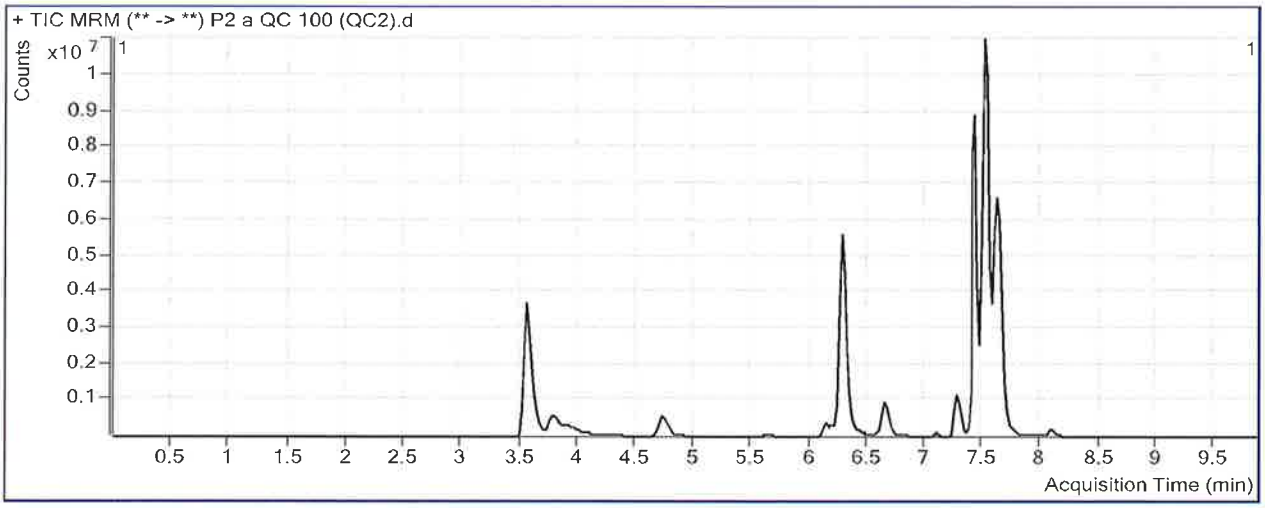
ISP FORENSICS - Pocatello Instrument # 59740
Multi-Drug Confirmatory Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.b		
Analysis Time	8/20/2018 3:20 PM	**Analyst Name**	ISPUser
Report Time	8/20/2018 3:23 PM	**Reporter Name**	ISPUser
Last Calib Update	8/20/2018 3:20 PM	**Batch State**	Processed

Analysis Info

Acq Time	2018-08-16 16:25	**Data File**	P2 a QC 100 (QC2).d
Sample Type	QC	**Sample Name**	P2 a QC 100 (QC2).d
Dilution	1	**Acq Method**	MDQ Panel 2a 06-22-18.m
Position	P2-B6	**Sample Info**	
Inj Vol	-1	**Comment**	AM 28-Panel 2

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
Zopiclone	Zopiclone-D4	6.131	848182	254048	3.3387	92.2584
Carbamazepine	Carbamazepine-13C6	7.437	18370446	6907326	2.6596	110.1190
Midazolam	Midazolam-D4	7.585	2113257	2939868	0.7188	105.8430
Chlordiazepoxide	Chlordiazepoxide-D5	7.627	1917750	4096622	0.4681	95.4940

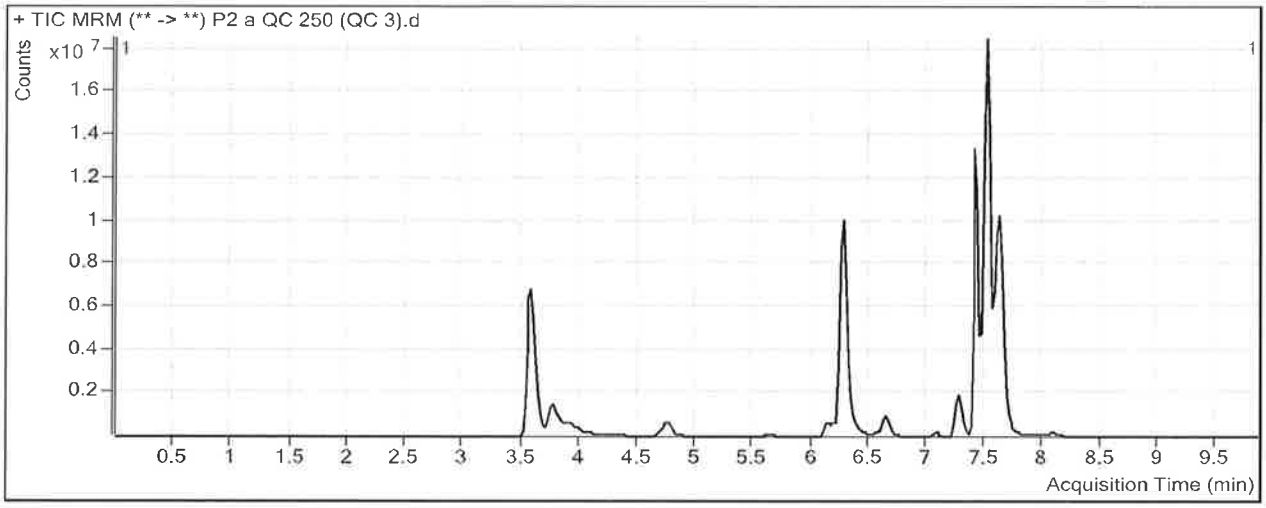
ISP FORENSICS - Pocatello Instrument # 59740
Multi-Drug Confirmatory Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.b		
Analysis Time	8/20/2018 3:20 PM	**Analyst Name**	ISPUser
Report Time	8/20/2018 3:23 PM	**Reporter Name**	ISPUser
Last Calib Update	8/20/2018 3:20 PM	**Batch State**	Processed

Analysis Info

Acq Time	2018-08-16 17:28	**Data File**	P2 a QC 250 (QC 3).d
Sample Type	QC	**Sample Name**	P2 a QC 250 (QC 3).d
Dilution	1	**Acq Method**	MDQ Panel 2a 06-22-18.m
Position	P2-C6	**Sample Info**	
Inj Vol	-1	**Comment**	AM 28-Panel 2

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
Zopiclone	Zopiclone-D4	6.111	1766244	200805	8.7958	238.7629
Carbamazepine	Carbamazepine-13C6	7.417	33513454	4759442	7.0415	292.2653
Midazolam	Midazolam-D4	7.565	4290171	2248003	1.9084	279.5828
Chlordiazepoxide	Chlordiazepoxide-D5	7.627	3791199	2868278	1.3218	267.2605

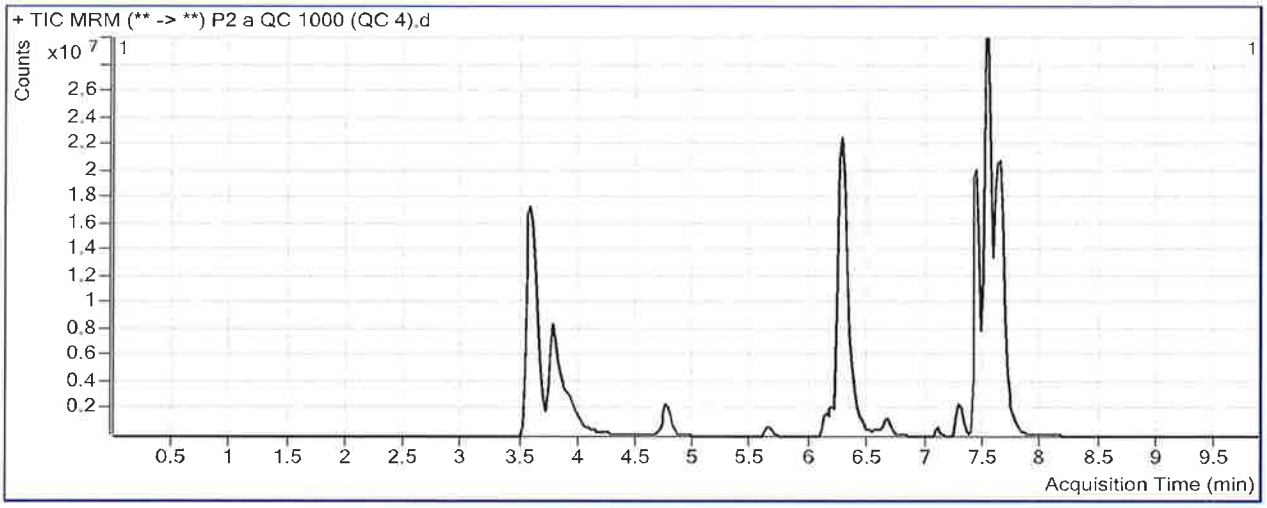
ISP FORENSICS - Pocatello Instrument # 59740
Multi-Drug Confirmatory Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.b		
Analysis Time	8/20/2018 3:20 PM	**Analyst Name**	ISPUser
Report Time	8/20/2018 3:23 PM	**Reporter Name**	ISPUser
Last Calib Update	8/20/2018 3:20 PM	**Batch State**	Processed

Analysis Info

Acq Time	2018-08-16 18:19	**Data File**	P2 a QC 1000 (QC 4).d
Sample Type	QC	**Sample Name**	P2 a QC 1000 (QC 4).d
Dilution	1	**Acq Method**	MDQ Panel 2a 06-22-18.m
Position	P2-D6	**Sample Info**	
Inj Vol	-1	**Comment**	AM 28-Panel 2

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
Zopiclone	Zopiclone-D4	6.131	4511460	116983	38.5650	1037.9559
~~Carbamazepine~~	~~Carbamazepine-13C6~~	~~7.437~~	~~65705814~~	~~4066415~~	~~16.1582~~	~~671.2264~~ *
Midazolam	Midazolam-D4	7.585	14361982	1945539	7.3820	1078.9860
Chlordiazepoxide	Chlordiazepoxide-D5	7.648	9763630	1974949	4.9437	996.0620

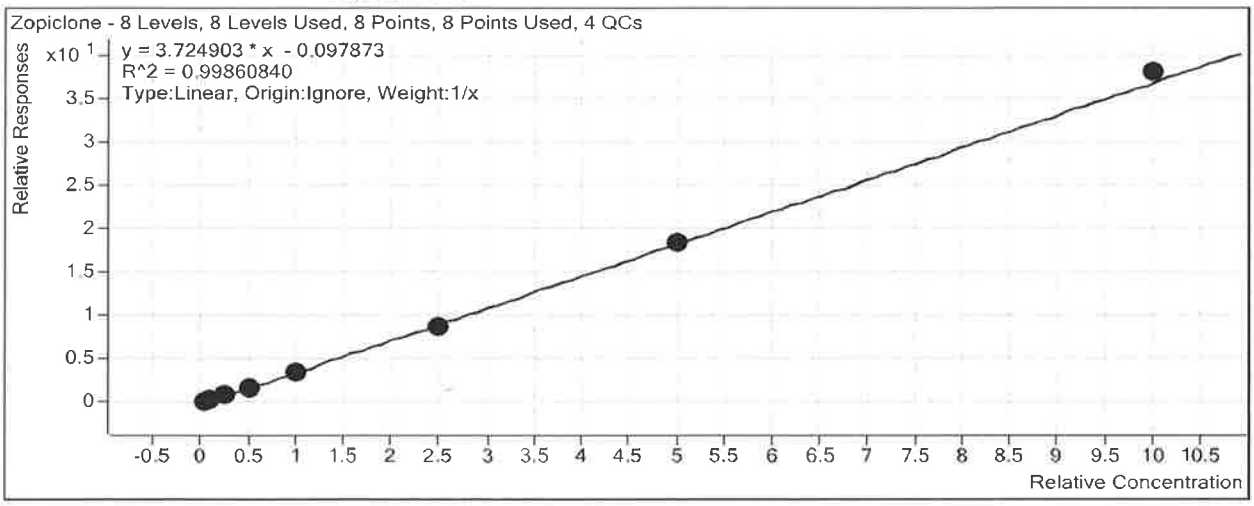
*outside curve range. JP

ISP Forensics
Calibration Curve Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.batch.bin		
Last Calib Update	8/20/2018 3:20 PM	**Analyst Name**	ISP TOX

Target Compound *Zopiclone*

Internal Standard *Zopiclone-D4*



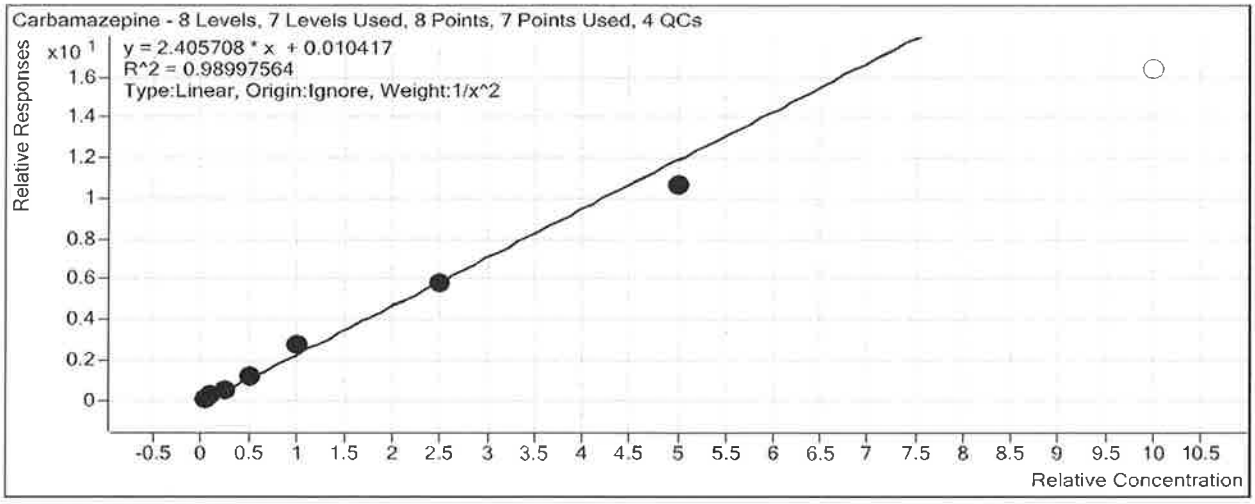
Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
P2 a cal 1-5ng.d	1	☑	5	6.0	119.7
P2 a cal 2-10ng.d	2	☑	10	10.7	107.3
P2 a QC 10 (QC1).d	2	☑	10	11.0	110.1
P2 a cal 3-25ng.d	3	☑	25	22.3	89.1
P2 a cal 4-50ng.d	4	☑	50	45.4	90.8
P2 a cal 5-100ng.d	5	☑	100	96.5	96.5
P2 a QC 100 (QC2).d	5	☑	100	92.3	92.3
P2 a cal 6-250ng.d	6	☑	250	237.4	95.0
P2 a QC 250 (QC 3).d	6	☑	250	238.8	95.5
P2 a cal 7-500ng.d	7	☑	500	495.2	99.0
P2 a cal 8-1000ng.d	8	☑	1000	1026.5	102.6
P2 a QC 1000 (QC 4).d	8	☑	1000	1038.0	103.8

ISP Forensics
Calibration Curve Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.batch.bin		
Last Calib Update	8/20/2018 3:20 PM	**Analyst Name**	ISP TOX

Target Compound *Carbamazepine*

Internal Standard *Carbamazepine-13C6*



Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
P2 a cal 1-5ng.d	1	☑	5	4.9	97.0
P2 a cal 2-10ng.d	2	☑	10	10.6	106.4
P2 a QC 10 (QC1).d	2	☑	10	9.9	99.1
P2 a cal 3-25ng.d	3	☑	25	23.9	95.6
P2 a cal 4-50ng.d	4	☑	50	50.5	101.1
P2 a cal 5-100ng.d	5	☑	100	114.8	114.8
P2 a QC 100 (QC2).d	5	☑	100	110.1	110.1
P2 a cal 6-250ng.d	6	☑	250	241.9	96.7
P2 a QC 250 (QC 3).d	6	☑	250	292.3	116.9
P2 a cal 7-500ng.d	7	☑	500	441.9	88.4
P2 a cal 8-1000ng.d	8	☐	1000	680.1	68.0
P2 a QC 1000 (QC 4).d	8	☐	1000	671.2	67.1

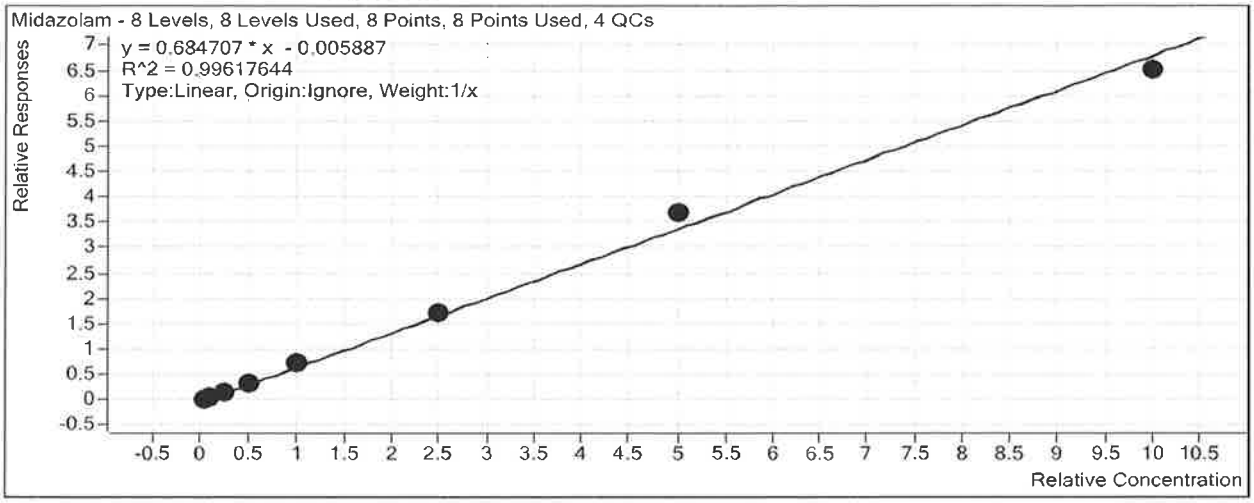
ISP Forensics
Calibration Curve Report

S

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.batch.bin		
Last Calib Update	8/20/2018 3:20 PM	**Analyst Name**	ISP TOX

Target Compound *Midazolam*

Internal Standard *Midazolam-D4*



Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
P2 a cal 1-5ng.d	1	☑	5	5.1	101.6
P2 a cal 2-10ng.d	2	☑	10	9.9	99.2
P2 a QC 10 (QC1).d	2	☑	10	9.1	91.2
P2 a cal 3-25ng.d	3	☑	25	21.5	86.2
P2 a cal 4-50ng.d	4	☑	50	50.7	101.4
P2 a cal 5-100ng.d	5	☑	100	106.9	106.9
P2 a QC 100 (QC2).d	5	☑	100	105.8	105.8
P2 a cal 6-250ng.d	6	☑	250	253.6	101.4
P2 a QC 250 (QC 3).d	6	☑	250	279.6	111.8
P2 a cal 7-500ng.d	7	☑	500	541.2	108.2
P2 a cal 8-1000ng.d	8	☑	1000	951.1	95.1
P2 a QC 1000 (QC 4).d	8	☑	1000	1079.0	107.9

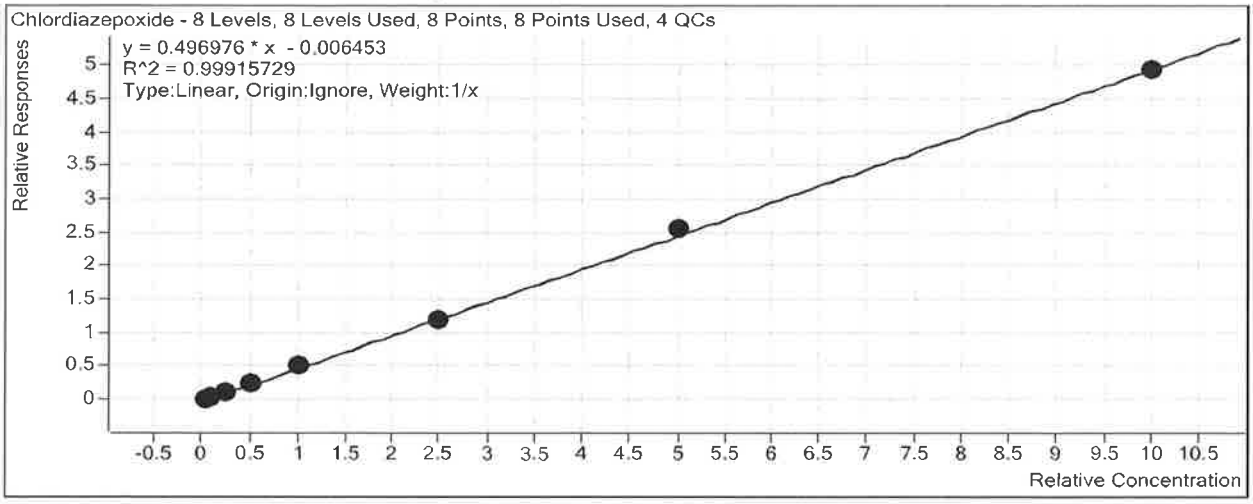
ISP Forensics
Calibration Curve Report

P

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.batch.bin		
Last Calib Update	8/20/2018 3:20 PM	**Analyst Name**	ISP TOX

Target Compound *Chlordiazepoxide*

Internal Standard *Chlordiazepoxide-D5*



Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
P2 a cal 1-5ng.d	1	☑	5	5.2	104.3
P2 a cal 2-10ng.d	2	☑	10	10.0	100.1
P2 a QC 10 (QC1).d	2	☑	10	9.6	95.6
P2 a cal 3-25ng.d	3	☑	25	22.9	91.8
P2 a cal 4-50ng.d	4	☑	50	50.1	100.1
P2 a cal 5-100ng.d	5	☑	100	105.8	105.8
P2 a QC 100 (QC2).d	5	☑	100	95.5	95.5
P2 a cal 6-250ng.d	6	☑	250	239.2	95.7
P2 a QC 250 (QC 3).d	6	☑	250	267.3	106.9
P2 a cal 7-500ng.d	7	☑	500	515.0	103.0
P2 a cal 8-1000ng.d	8	☑	1000	991.7	99.2
P2 a QC 1000 (QC 4).d	8	☑	1000	996.1	99.6

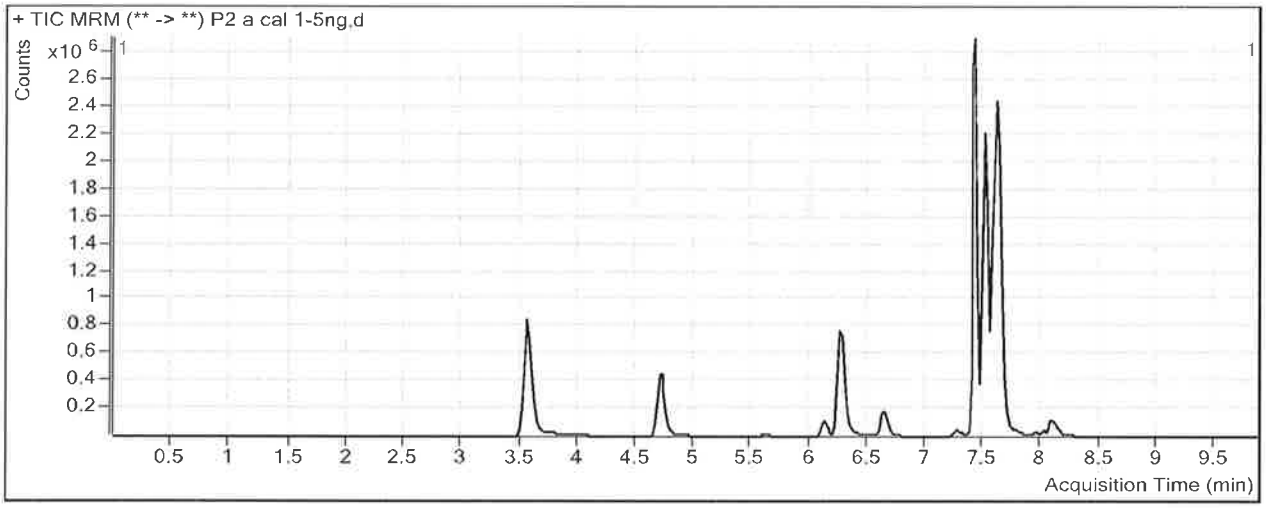
ISP FORENSICS - Pocatello Instrument # 59740
Multi-Drug Confirmatory Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.b		
Analysis Time	8/20/2018 3:20 PM	**Analyst Name**	ISPUser
Report Time	8/20/2018 3:21 PM	**Reporter Name**	ISPUser
Last Calib Update	8/20/2018 3:20 PM	**Batch State**	Processed

Analysis Info

Acq Time	2018-08-16 10:15	**Data File**	P2 a cal 1-5ng.d
Sample Type	Calibration	**Sample Name**	P2 a cal 1-5ng.d
Dilution	1	**Acq Method**	MDQ Panel 2a 06-22-18.m
Position	P2-A5	**Sample Info**	
Inj Vol	-1	**Comment**	AM 28-Panel 2

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
Zopiclone	Zopiclone-D4	6.111	49786	398350	0.1250	5.9828
Carbamazepine	Carbamazepine-13C6	7.417	1040375	8185551	0.1271	4.8502
Midazolam	Midazolam-D4	7.585	73491	2543605	0.0289	5.0794
Chlordiazepoxide	Chlordiazepoxide-D5	7.627	94100	4832543	0.0195	5.2165

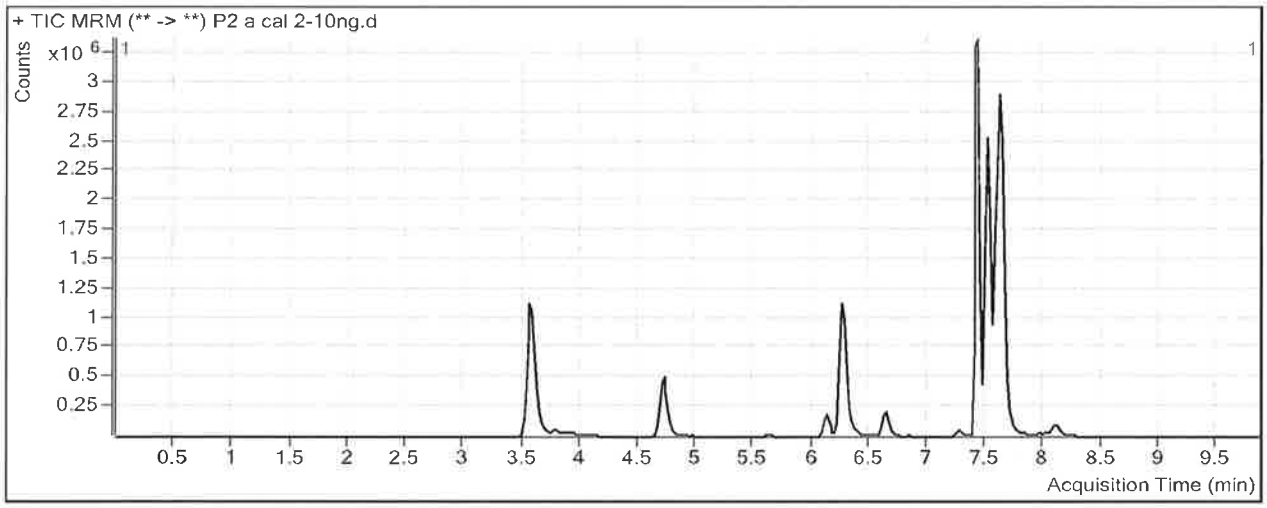
ISP FORENSICS - Pocatello Instrument # 59740
Multi-Drug Confirmatory Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.b		
Analysis Time	8/20/2018 3:20 PM	**Analyst Name**	ISPUser
Report Time	8/20/2018 3:21 PM	**Reporter Name**	ISPUser
Last Calib Update	8/20/2018 3:20 PM	**Batch State**	Processed

Analysis Info

Acq Time	2018-08-16 10:40	**Data File**	P2 a cal 2-10ng.d
Sample Type	Calibration	**Sample Name**	P2 a cal 2-10ng.d
Dilution	1	**Acq Method**	MDQ Panel 2a 06-22-18.m
Position	P2-B5	**Sample Info**	
Inj Vol	-1	**Comment**	AM 28-Panel 2

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
Zopiclone	Zopiclone-D4	6.111	154292	511388	0.3017	10.7274
Carbamazepine	Carbamazepine-13C6	7.417	2317430	8698175	0.2664	10.6418
Midazolam	Midazolam-D4	7.585	174368	2810811	0.0620	9.9198
Chlordiazepoxide	Chlordiazepoxide-D5	7.627	227574	5256218	0.0433	10.0103

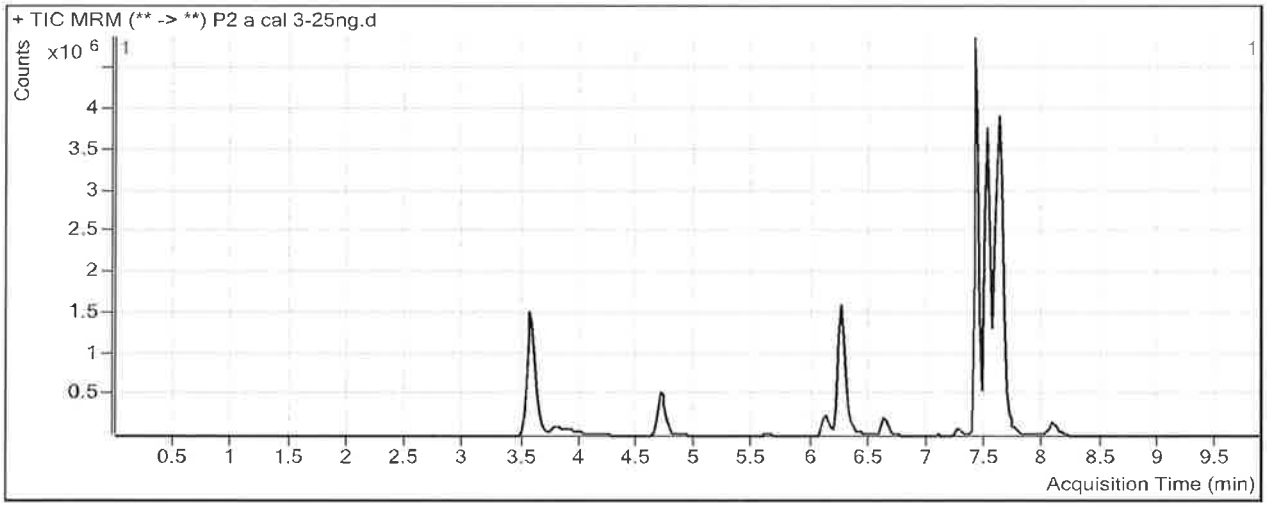
ISP FORENSICS - Pocatello Instrument # 59740
Multi-Drug Confirmatory Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.b		
Analysis Time	8/20/2018 3:20 PM	**Analyst Name**	ISPUser
Report Time	8/20/2018 3:21 PM	**Reporter Name**	ISPUser
Last Calib Update	8/20/2018 3:20 PM	**Batch State**	Processed

Analysis Info

Acq Time	2018-08-16 11:06	**Data File**	P2 a cal 3-25ng.d
Sample Type	Calibration	**Sample Name**	P2 a cal 3-25ng.d
Dilution	1	**Acq Method**	MDQ Panel 2a 06-22-18.m
Position	P2-C5	**Sample Info**	
Inj Vol	-1	**Comment**	AM 28-Panel 2

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
Zopiclone	Zopiclone-D4	6.111	372960	509686	0.7317	22.2722
Carbamazepine	Carbamazepine-13C6	7.417	5647751	9646375	0.5855	23.9041
Midazolam	Midazolam-D4	7.585	438624	3097541	0.1416	21.5407
Chlordiazepoxide	Chlordiazepoxide-D5	7.627	610307	5674097	0.1076	22.9413

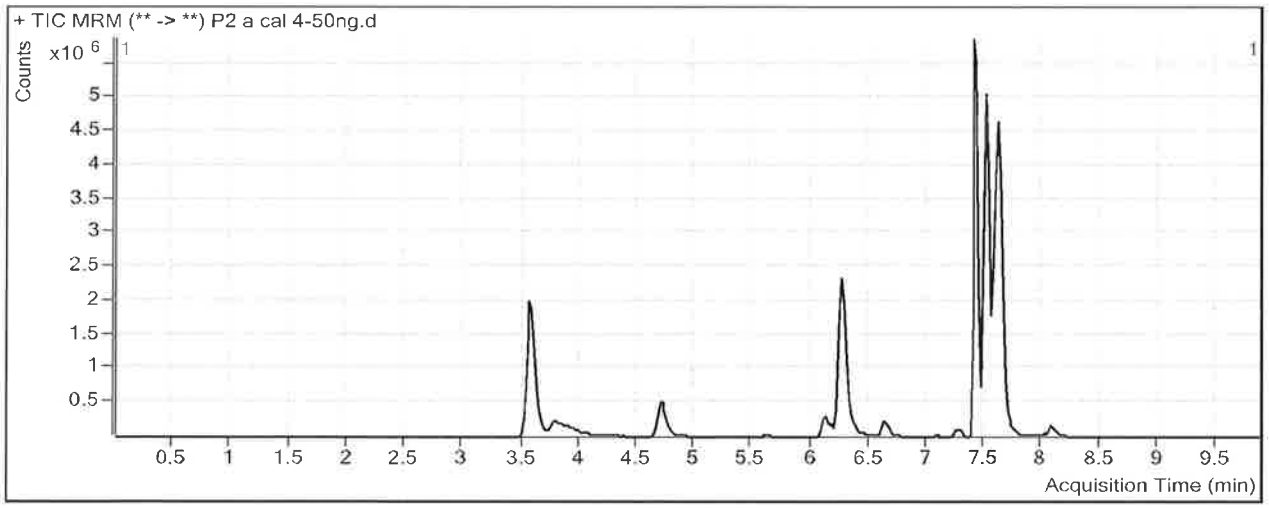
ISP FORENSICS - Pocatello Instrument # 59740
Multi-Drug Confirmatory Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.b		
Analysis Time	8/20/2018 3:20 PM	**Analyst Name**	ISPUser
Report Time	8/20/2018 3:22 PM	**Reporter Name**	ISPUser
Last Calib Update	8/20/2018 3:20 PM	**Batch State**	Processed

Analysis Info

Acq Time	2018-08-16 11:31	**Data File**	P2 a cal 4-50ng.d
Sample Type	Calibration	**Sample Name**	P2 a cal 4-50ng.d
Dilution	1	**Acq Method**	MDQ Panel 2a 06-22-18.m
Position	P2-D5	**Sample Info**	
Inj Vol	-1	**Comment**	AM 28-Panel 2

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
Zopiclone	Zopiclone-D4	6.111	594664	373081	1.5939	45.4187
Carbamazepine	Carbamazepine-13C6	7.417	10132143	8263937	1.2261	50.5319
Midazolam	Midazolam-D4	7.585	922436	2703723	0.3412	50.6873
Chlordiazepoxide	Chlordiazepoxide-D5	7.627	1161730	4792468	0.2424	50.0749

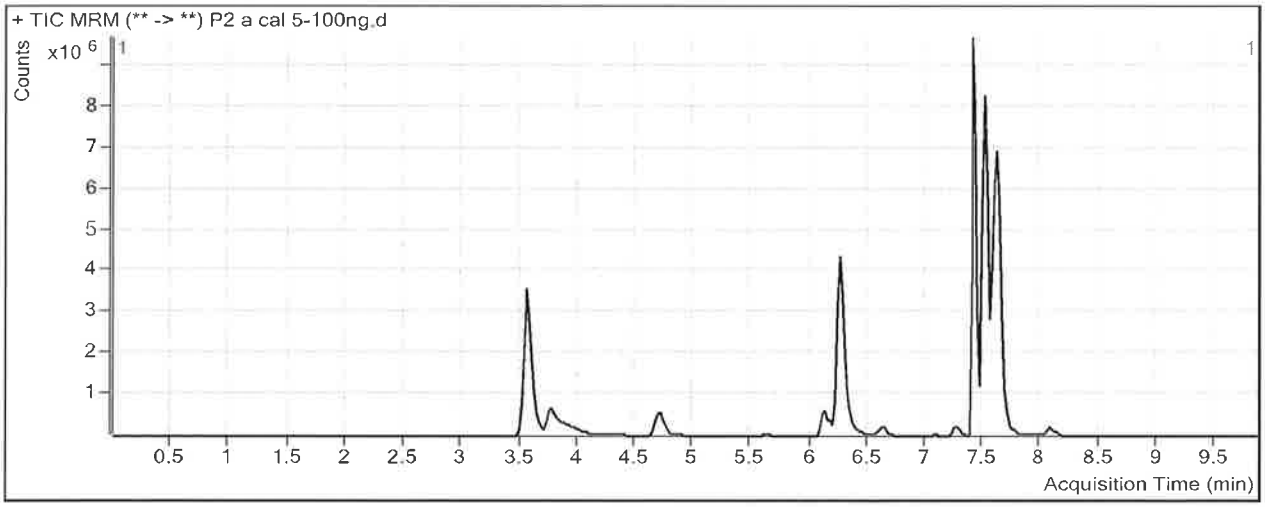
ISP FORENSICS - Pocatello Instrument # 59740
Multi-Drug Confirmatory Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.b		
Analysis Time	8/20/2018 3:20 PM	**Analyst Name**	ISPUser
Report Time	8/20/2018 3:22 PM	**Reporter Name**	ISPUser
Last Calib Update	8/20/2018 3:20 PM	**Batch State**	Processed

Analysis Info

Acq Time	2018-08-16 11:57	**Data File**	P2 a cal 5-100ng.d
Sample Type	Calibration	**Sample Name**	P2 a cal 5-100ng.d
Dilution	1	**Acq Method**	MDQ Panel 2a 06-22-18.m
Position	P2-E5	**Sample Info**	
Inj Vol	-1	**Comment**	AM 28-Panel 2

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
Zopiclone	Zopiclone-D4	6.111	1395427	399139	3.4961	96.4849
Carbamazepine	Carbamazepine-13C6	7.417	22173941	8000899	2.7714	114.7693
Midazolam	Midazolam-D4	7.565	1983261	2731447	0.7261	106.9028
Chlordiazepoxide	Chlordiazepoxide-D5	7.627	2326962	4481444	0.5192	105.7791

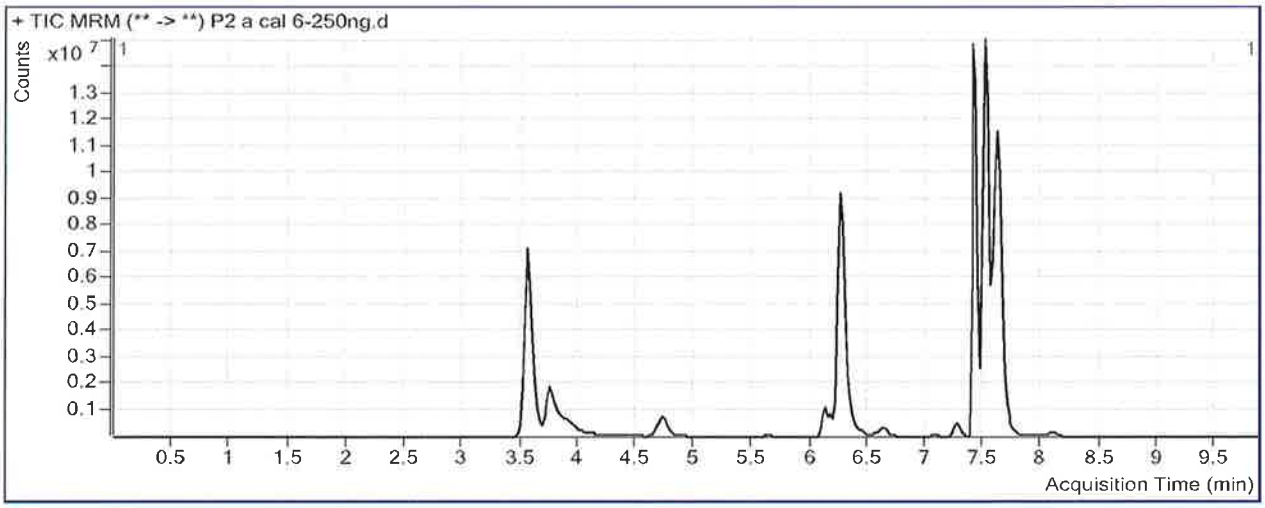
ISP FORENSICS - Pocatello Instrument # 59740
Multi-Drug Confirmatory Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.b		
Analysis Time	8/20/2018 3:20 PM	**Analyst Name**	ISPUser
Report Time	8/20/2018 3:22 PM	**Reporter Name**	ISPUser
Last Calib Update	8/20/2018 3:20 PM	**Batch State**	Processed

Analysis Info

Acq Time	2018-08-16 12:22	**Data File**	P2 a cal 6-250ng.d
Sample Type	Calibration	**Sample Name**	P2 a cal 6-250ng.d
Dilution	1	**Acq Method**	MDQ Panel 2a 06-22-18.m
Position	P2-F5	**Sample Info**	
Inj Vol	-1	**Comment**	AM 28-Panel 2

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
Zopiclone	Zopiclone-D4	6.111	2751111	314552	8.7461	237.4287
Carbamazepine	Carbamazepine-13C6	7.417	41936571	7194724	5.8288	241.8572
Midazolam	Midazolam-D4	7.565	4310878	2491409	1.7303	253.5660
Chlordiazepoxide	Chlordiazepoxide-D5	7.627	4621806	3908319	1.1826	239.2487

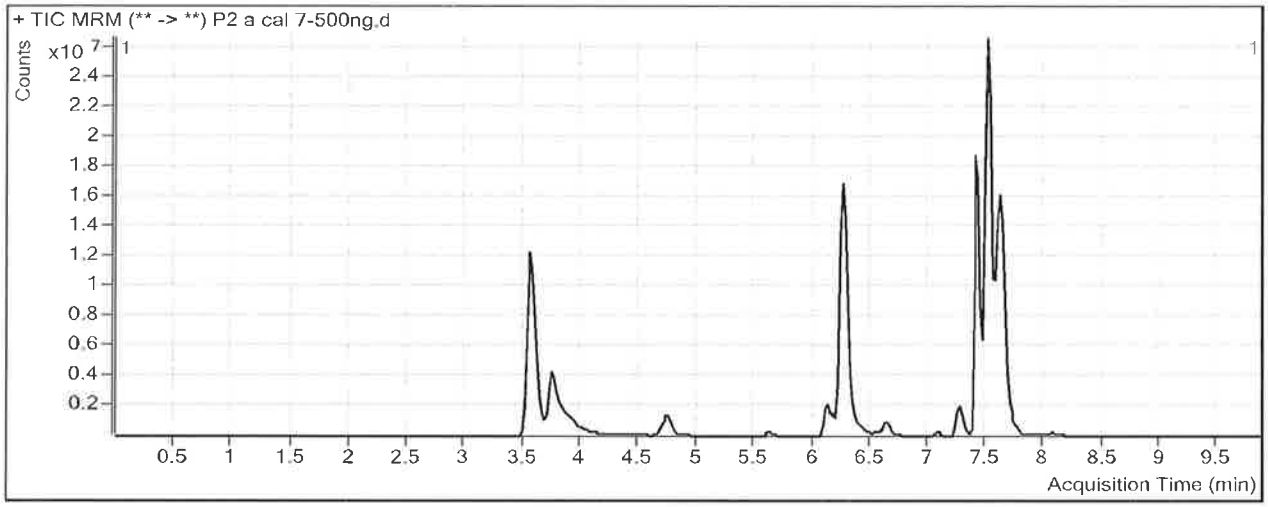
ISP FORENSICS - Pocatello Instrument # 59740
Multi-Drug Confirmatory Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.b		
Analysis Time	8/20/2018 3:20 PM	**Analyst Name**	ISPUser
Report Time	8/20/2018 3:22 PM	**Reporter Name**	ISPUser
Last Calib Update	8/20/2018 3:20 PM	**Batch State**	Processed

Analysis Info

Acq Time	2018-08-16 12:48	**Data File**	P2 a cal 7-500ng.d
Sample Type	Calibration	**Sample Name**	P2 a cal 7-500ng.d
Dilution	1	**Acq Method**	MDQ Panel 2a 06-22-18.m
Position	P2-G5	**Sample Info**	
Inj Vol	-1	**Comment**	AM 28-Panel 2

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
Zopiclone	Zopiclone-D4	6.111	5501799	299862	18.3478	495.1979
Carbamazepine	Carbamazepine-13C6	7.417	58006069	5450714	10.6419	441.9282
Midazolam	Midazolam-D4	7.565	7964859	2152940	3.6995	541.1677
Chlordiazepoxide	Chlordiazepoxide-D5	7.627	7383798	2892286	2.5529	514.9907

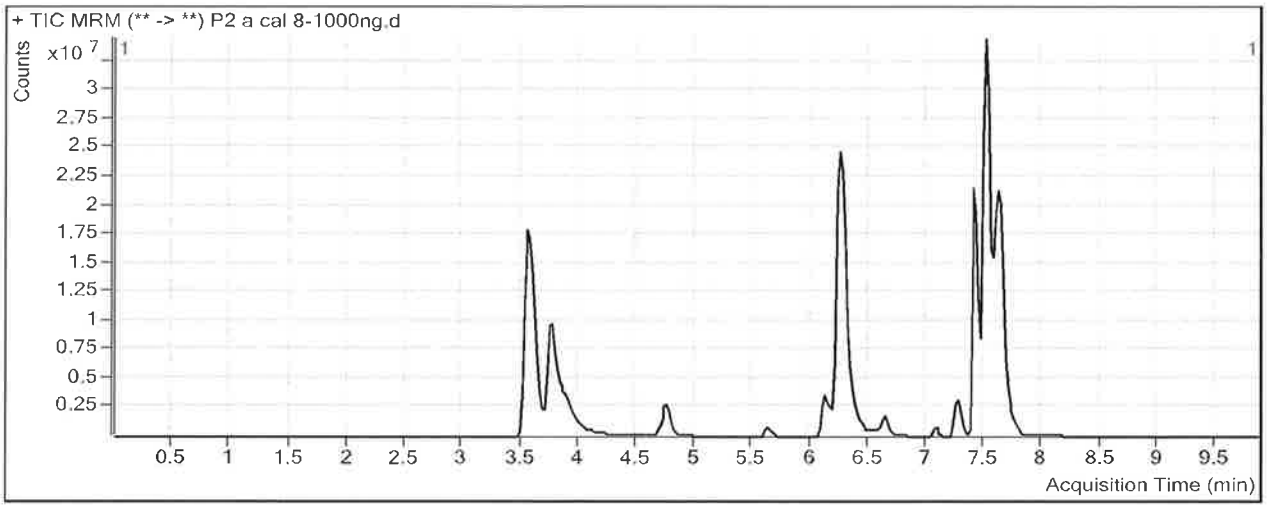
ISP FORENSICS - Pocatello Instrument # 59740
Multi-Drug Confirmatory Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\MD Quant\081518 P1 P2 SP\QuantResults\081518 MDQ P2a compounds removed.b		
Analysis Time	8/20/2018 3:20 PM	**Analyst Name**	ISPUser
Report Time	8/20/2018 3:22 PM	**Reporter Name**	ISPUser
Last Calib Update	8/20/2018 3:20 PM	**Batch State**	Processed

Analysis Info

Acq Time	2018-08-16 13:14	**Data File**	P2 a cal 8-1000ng.d
Sample Type	Calibration	**Sample Name**	P2 a cal 8-1000ng.d
Dilution	1	**Acq Method**	MDQ Panel 2a 06-22-18.m
Position	P2-H5	**Sample Info**	
Inj Vol	-1	**Comment**	AM 28-Panel 2

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
Zopiclone	Zopiclone-D4	6.111	9276093	243226	38.1378	1026.4875
Carbamazepine	Carbamazepine-13C6	7.417	73470135	4487358	16.3727	680.1438
Midazolam	Midazolam-D4	7.565	11651140	1790662	6.5066	951.1363
Chlordiazepoxide	Chlordiazepoxide-D5	7.627	11190447	2273441	4.9223	991.7384