

REVIEWED
By Sarah Collins at 8:16 am, Aug 12, 2022

TS AH

8/10/2022

Worklist: 6060

<u>LAB_CASE</u>	<u>ITEM</u>	<u>ITEM_TYPE</u>	<u>DESCRIPTION</u>
M2022-2777	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ
P2022-2217	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ
P2022-2365	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ



TS AH

8/10/2022

Worklist: 6061

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>
P2022-1796	1	UCK	AM 28 Urine Multi-Drug Confirmation Panel 2 by LC-QQ



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

AM TS

Extraction Date: 8/10/2022

Analyst: Amber Gerheart

Plate lot#: 220316

Plate Retest Date: 09/24/2022

Mobile phase A: 5mM Amm Form + 0.01% FA

Mobile phase B: 0.01% Formic Acid in MeOH

Blank Blood Lot: Lampire 22B52015-1

Blank Urine Lot: POC021022

Column: Agilent 120 EC-C18 (2.1x 100-2.7um)

LCMS-QQQ ID: 069901

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. **Urine Hydrolysis: In blank well, add 250µL urine, 40µL BG Turbo, and 100µL Instant Buffer I. Place on plate shaker for 5 minutes.**
- 3. Using a calibrated pipette, pipette 250µL blood or 250µL hydrolyzed urine in wells of analytical (standards) plate.
Pipette ID: 42
- 4. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. **Skipped per deviation**
- 5. Pipette **250µL 0.5M ammonium hydroxide** in wells of analytical plate.
- 6. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 7. Transfer **300µL of blood+base/urine+base** mixture to corresponding wells of SLE+ plate.
- 8. 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)
- 9. Wait 5 minutes.
- 10. Add **900uL ethyl acetate.**
- 11. Wait 5 minutes.
- 12. Apply positive pressure for approx. 15 seconds. **(10-15 PSI- Selector to the left).**
- 13. Add **900uL ethyl acetate.**
- 14. Wait 5 minutes.
- 15. Apply positive pressure for approx. 15 seconds. **(10-15 PSI- Selector to the left).**
- 16. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C.
- 17. **Add 50µL 1% HCl in MeOH to wells and place plate cover on plate before drying. This step is required for urine samples, but optional for blood samples.**
- 18. Reconstitute in **100µL 20% MeOH** and heat seal plate with foil.

Post-Analytic

- 1. Create batch and process data.
- 2. Make necessary changes to integration limits
- 3. Integration linear and R² 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? Yes, see comments Add Control data to QC tracking spreadsheet.
- 6. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports.

COMMENTS: *Compounds evaluated:* 7-aminoflunitrazepam, amitriptyline, duloxetine, flurazepam, hydroxyzine, 10-OH-carbamazepine, 9-hydroxyrisperidone, alpha-hydroxymidazolam, midazolam

Curve Ranges: 7-aminoflunitrazepam 5-250 ng/mL, alpha-hydroxymidazolam 5-500 ng/mL, flurazepam 5-500 ng/mL, hydroxyzine 5-500 ng/mL

Tamara Salazar had samples in this batch. Amber Gerheart acted as the primary analyst and preformed steps 3-18. Tamara Salazar did step 2 for urine samples.

I, Tamara Salazar, approved of all steps utilized in this method. TS

Step 17 done for all samples (blood and urine)

AM TS

**Idaho State Police
Forensic Services**

Request for Departure from an Analytical Method or Quality Standard

Deviation Number (assigned by QM): TOX-22-01

Date of Request: **2/3/2022**

Requestor/Discipline: Celena Shrum/Toxicology

Analytical Method/Quality Standard, Revision #: AM #25, AM #28, AM #29, Revision 13

Temporary or Permanent Deviation: Permanent

Scope of Deviation (record specific information, e.g. affected programs, evidence types, expected end date; etc): Deviation will remain in place until the change is made in the next method revision.

Deviation Request (Describe detailed instructions of the changes being made; include reference to specific section number(s) in the method manual): 4.1.4 (Place plate on shaking incubator at approximately 900 rpm for approximately 15 minutes) of AM #25, AM # 28, and AM #29 is being removed. The removal of this step was tested in the validation “Addition of Compounds/Modifications for the MDS” (approved on 2/2/2022) and it was determined that that step is not necessary and can be removed.

Technical Justification for Analytical Method Deviations: Refer to validation “Addition of Compounds/Modifications for the MDS” (approved on 2/2/2022)

Technical Review

Departure approved
Comments:

Departure Not Approved
Comments:

Approver: Rachel Cutler
Title: Laboratory Manager



Date: 2/10/2022

Quality Review

Quality Approver: Jason Crowe
Title: Quality Manager
Date: 2/10/2022



Analytical plate map

AM TS

	1	2	3	4	5	6	7	8	9	10	11	12
A	IS + Cal. 1	IS + QC_1	IS + Sample	IS + Cal. 1	IS + QC_1	M2022-2777-1	IS + Sample	IS + Sample	IS + Cal. 8	IS + Sample	IS + Sample	IS + Cal. 8
B	IS + Cal. 2	IS + QC_2	IS + Sample	IS + Cal. 2	IS + QC_2	P2022-2217-1	IS + Sample	IS + Sample	IS + Cal. 7	IS + Sample	IS + Sample	IS + Cal. 7
C	IS + Cal. 3	IS + QC_3	IS + Sample	IS + Cal. 3	IS + QC_3	P2022-2365-1	IS + Sample	IS + Sample	IS + Cal. 6	IS + Sample	IS + Sample	IS + Cal. 6
D	IS + Cal. 4	IS + QC_4	IS + Sample	IS + Cal. 4	IS + QC_4	IS + Sample	IS + Sample	IS + Sample	IS + Cal. 5	IS + Sample	IS + Sample	IS + Cal. 5
E	IS + Cal. 5	IS + Sample	IS + Sample	IS + Cal. 5	Negative Blood	IS + Sample	IS + Sample	IS + QC_4	IS + Cal. 4	IS + Sample	IS + QC_4	IS + Cal. 4
F	IS + Cal. 6	IS + Sample	IS + Sample	IS + Cal. 6	Negative Urine	IS + Sample	IS + Sample	IS + QC_3	IS + Cal. 3	IS + Sample	IS + QC_3	IS + Cal. 3
G	IS + Cal. 7	IS + Sample	IS + Sample	IS + Cal. 7	Urine External	IS + Sample	IS + Sample	IS + QC_2	IS + Cal. 2	IS + Sample	IS + QC_2	IS + Cal. 2
H	IS + Cal. 8	IS + Sample	IS + Sample	IS + Cal. 8	P2022-1796-1	IS + Sample	IS + Sample	IS + QC_1	IS + Cal. 1	IS + Sample	IS + QC_1	IS + Cal. 1

All wells to contain 60 µl of Trapping Solution

SLE and collection plate map

AM TS

	1	2	3	4	5	6	7	8	9	10	11	12
A	IS + Cal. 1	IS + QC_1	M2022-2777-1									
B	IS + Cal. 2	IS + QC_2	P2022-2217-1									
C	IS + Cal. 3	IS + QC_3	P2022-2365-1									
D	IS + Cal. 4	IS + QC_4										
E	IS + Cal. 5	Negative Blood										
F	IS + Cal. 6	Negative Urine										
G	IS + Cal. 7	Urine External										
H	IS + Cal. 8	P2022-1796-1										

All wells to contain 60 µl of Trapping Solution

TS AH

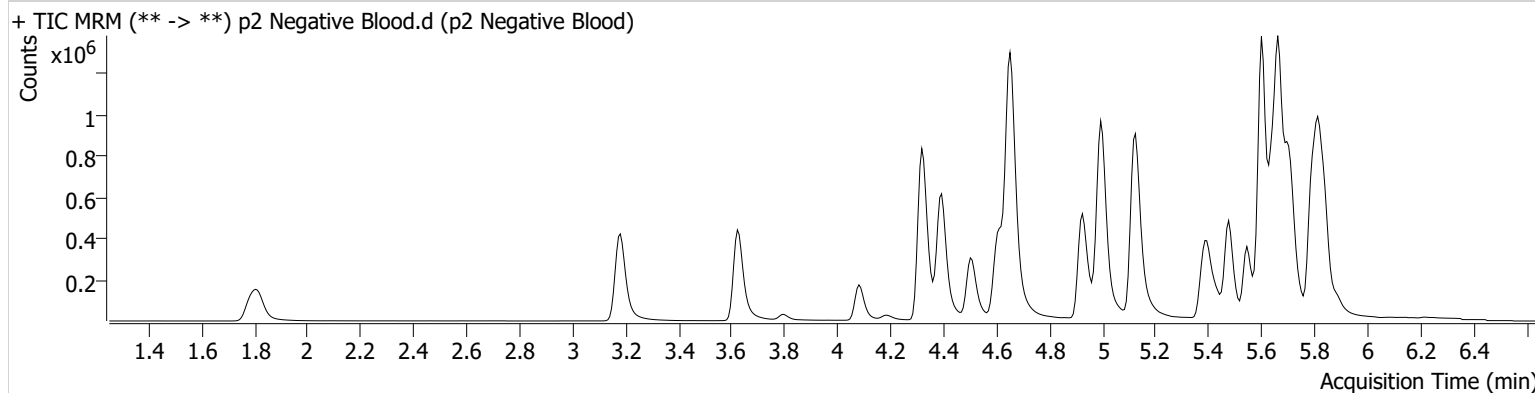


AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument	Falco (069901)	Data File	p2 Negative Blood.d
Type	Sample	Sample	p2 Negative Blood
Acq. Method	AM 28 MDQ P2 061022.m	Operator	Amber Gerheart
Sample Position	P2-E2	Comment	
Injection Volume	5		
Acq. Date-Time	8/10/2022 6:58:51 PM		
Sample Info.			

Sample Chromatogram



TS AM

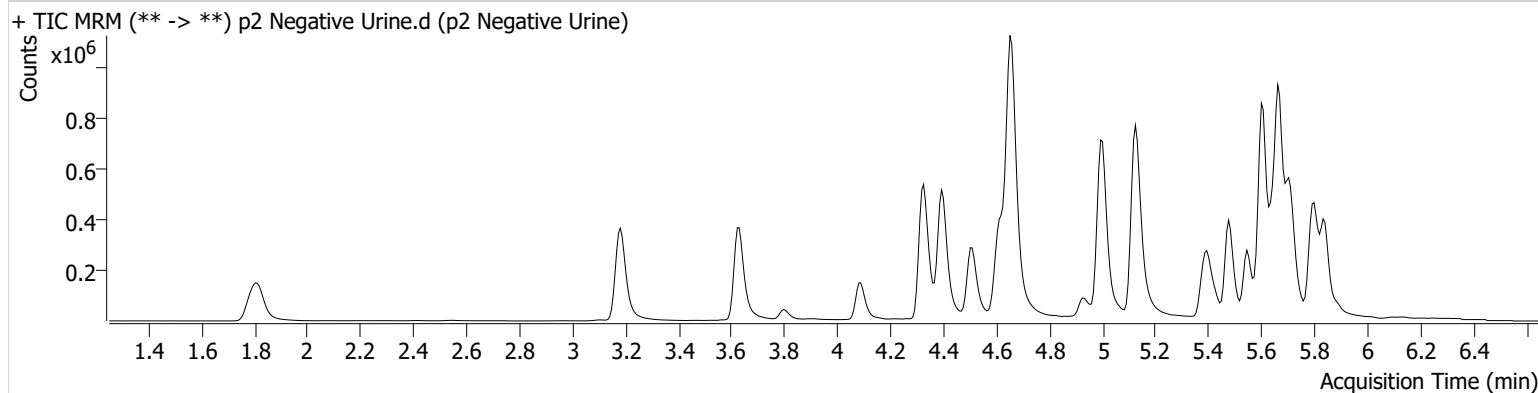


AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument	Falco (069901)	Data File	p2 Negative Urine.d
Type	Sample	Sample	p2 Negative Urine
Acq. Method	AM 28 MDQ P2 061022.m	Operator	Amber Gerheart
Sample Position	P2-F2	Comment	
Injection Volume	5		
Acq. Date-Time	8/10/2022 7:20:18 PM		
Sample Info.			

Sample Chromatogram



TS AM

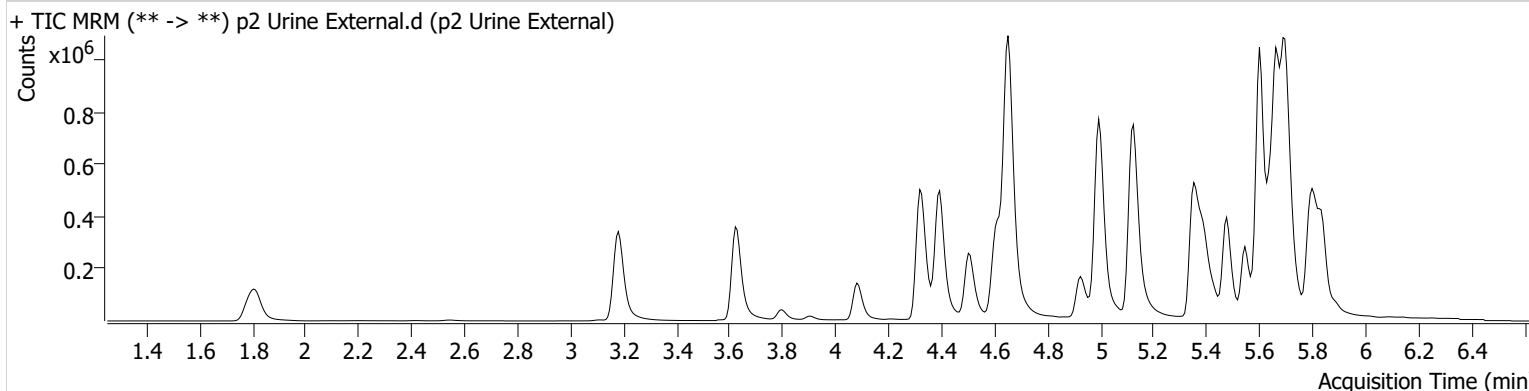


AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument	Falco (069901)	Data File	p2 Urine External.d
Type	Sample	Sample	p2 Urine External
Acq. Method	AM 28 MDQ P2 061022.m	Operator	Amber Gerheart
Sample Position	P2-G2	Comment	
Injection Volume	5		
Acq. Date-Time	8/10/2022 7:41:44 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Amitriptyline	5.699	264980	2088.65	201.1	3395.64	302724	46.9260 ng/ml
Flurazepam	5.352	1137098	2061.47	12.7	3864.13	544639	44.3215 ng/ml

AM TS



Idaho State Police Forensic Services

AM #28 Blood/Urine Multi-Drug Confirmatory Analysis by LCMS-QQQ---Panel 2

Methanol External Control Solution (Lot: 011922)

100 ul each 1 mg/mL stock solution in 9800 ul MeOH

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	215245	
Amitriptyline	Cerilliant	FN02202004	03/31/2025
Flurazepam	Cerilliant	FE08231902	11/30/2024
Prepared:	01/19/2022		
Prepared By:	Sarah Collins		
Expires:	01/19/2023		

Blood External Control Solution (Lot: WS011922)

100 ul of methanol external control solution was added to 9900ul of blood.

Approximately 100ng/mL of each compound.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Blood	Lampire	20L20725
Methanol External Control Solution	-	011922
Prepared:	01/19/2022	
Prepared by:	Sarah Collins	
Expires:	01/19/2023	

Urine External Control Solution (Lot: WS011922)

100 ul of methanol external control solution was added to 9900ul of urine.

Approximately 100ng/mL of each compound.

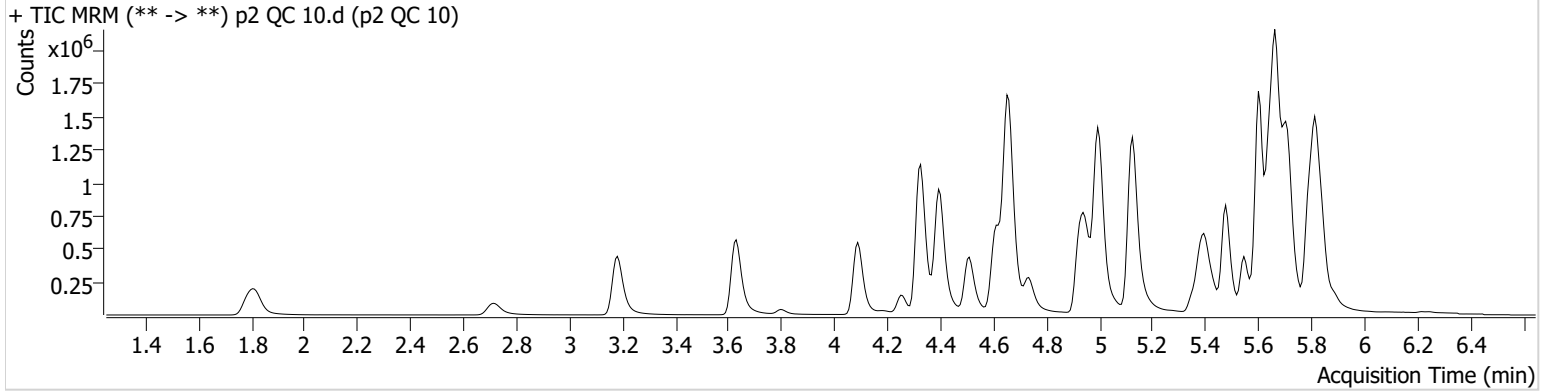
<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Urine		POC031319
Methanol External Control Solution	-	011922
Prepared:	01/19/2022	
Prepared by:	Sarah Collins	
Expires:	01/19/2023	

AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument	Falco (069901)	Data File	p2 QC 10.d
Type	QC	Sample	p2 QC 10
Acq. Method	AM 28 MDQ P2 061022.m	Operator	Amber Gerheart
Sample Position	P2-A2	Comment	
Injection Volume	5		
Acq. Date-Time	8/10/2022 5:43:48 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
10-OH-Carbazepine	4.997	377903	584.83	86.5	221.77	1291327	10.3168 ng/ml
7-aminoflunitrazepam	4.646	127254	378.45	24.2	310.26	631693	10.6173 ng/ml
9-Hydroxyrisperidone	4.664	18658	61346.83	3182.1	5640.70	2080181	10.0988 ng/ml
alpha-hydroxymidazolam	5.805	112539	513.76	69.2	1529.58	486346	9.8297 ng/ml
Amitriptyline	5.699	134432		259.4	1047.58	662200	10.6644 ng/ml
Duloxetine	5.664	27374	170.60	13.2	76.05	120761	11.1791 ng/ml
Flurazepam	5.352	318587	550.30	12.9	2102.79	631693	10.4450 ng/ml
Hydroxyzine	5.709	314522	1404.12	70.9	31677.14	1178349	11.2566 ng/ml
Midazolam	5.799	46793	2421.60	93.4	713.87	610468	11.0111 ng/ml

AM TS

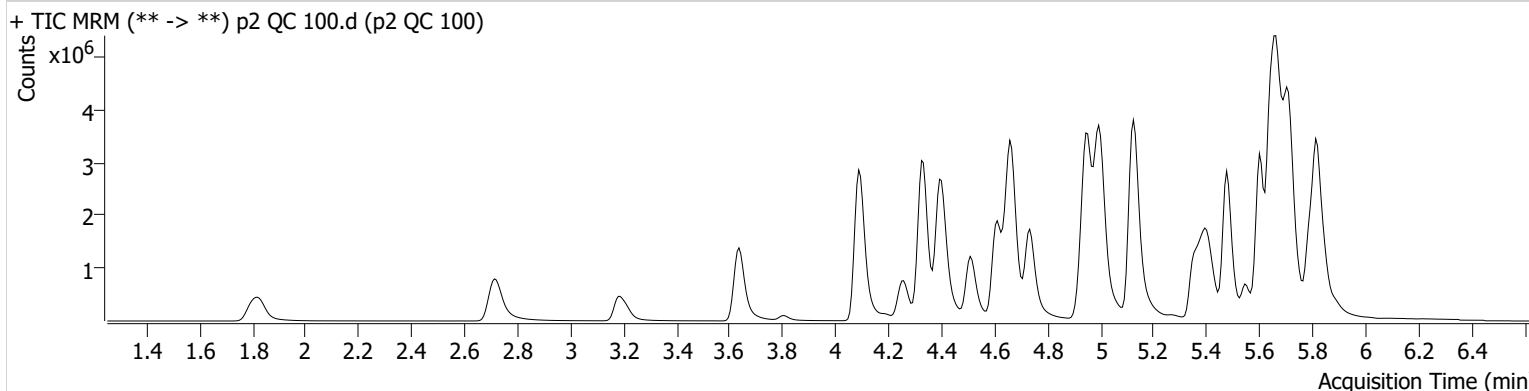


AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument	Falco (069901)	Data File	p2 QC 100.d
Type	QC	Sample	p2 QC 100
Acq. Method	AM 28 MDQ P2 061022.m	Operator	Amber Gerheart
Sample Position	P2-B2	Comment	
Injection Volume	5		
Acq. Date-Time	8/10/2022 9:28:59 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
10-OH-Carbazepine	5.004	2602602	451.73	87.4	15804.08	939551	97.5828 ng/ml
7-aminoflunitrazepam	4.646	923018	6435.13	25.5	2004.22	541497	96.3166 ng/ml
9-Hydroxyrisperidone	4.664	152238	586.52	3280.2	207964.17	1743367	95.5054 ng/ml
alpha-hydroxymidazolam	5.805	673843	909.03	64.3	517.37	295201	104.1214 ng/ml
Amitriptyline	5.692	985567	1326.96	234.7	∞	501423	105.7279 ng/ml
Duloxetine	5.664	163639	2213.34	13.0	285.23	81711	103.3635 ng/ml
Flurazepam	5.352	2609475	24090.07	13.7	1377.70	541497	102.7525 ng/ml
Hydroxyzine	5.709	2230291	30155.22	76.5	123374.27	955582	105.0461 ng/ml
Midazolam	5.799	300454	849.12	94.0	491.32	449684	100.8871 ng/ml

AM TS

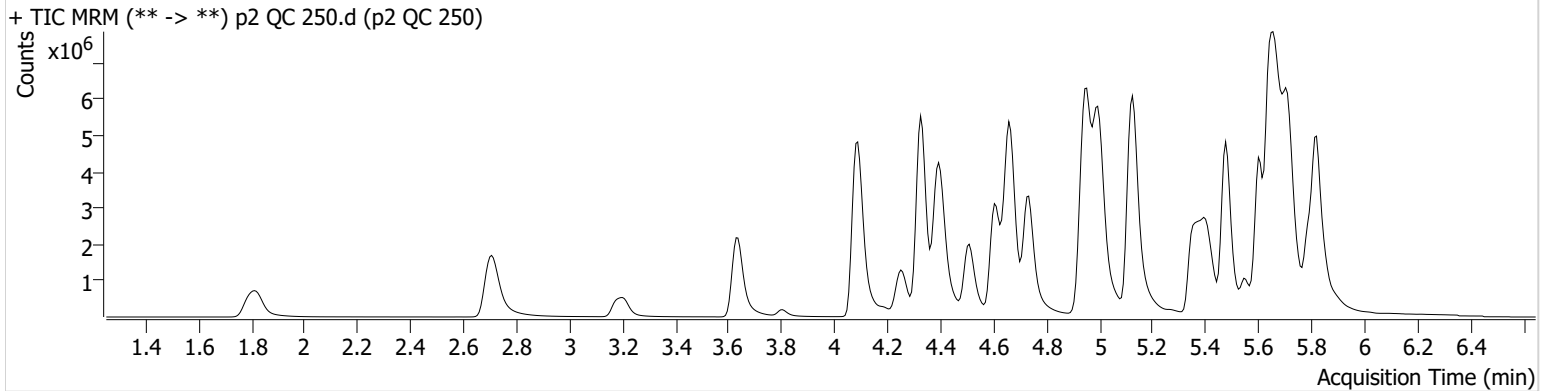


AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument	Falco (069901)	Data File	p2 QC 250.d
Type	QC	Sample	p2 QC 250
Acq. Method	AM 28 MDQ P2 061022.m	Operator	Amber Gerheart
Sample Position	P2-C2	Comment	
Injection Volume	5		
Acq. Date-Time	8/10/2022 6:05:15 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
10-OH-Carbazepine	5.004	4684939	8085.21	86.5	64096.84	672573	245.3736 ng/ml
7-aminoflunitrazepam	4.639	1832920		25.8	788.82	481158	216.3221 ng/ml
9-Hydroxyrisperidone	4.664	301960	19013.84	3361.3	∞	1364220	241.5849 ng/ml
alpha-hydroxymidazolam	5.805	951789		64.0	∞	165368	263.7637 ng/ml
Amitriptyline	5.692	1701380	1030.92	233.1	28459.35	347831	263.5362 ng/ml
Duloxetine	5.664	244010	546.32	12.8	129.81	49658	254.4734 ng/ml
Flurazepam	5.352	5276858	49693.14	13.9	5354.36	481158	234.2823 ng/ml
Hydroxyzine	5.709	3873126	33803.61	75.2	62500.94	731495	239.3912 ng/ml
Midazolam	5.799	489670	4266.62	90.2	220.12	304160	243.9850 ng/ml

AM TS

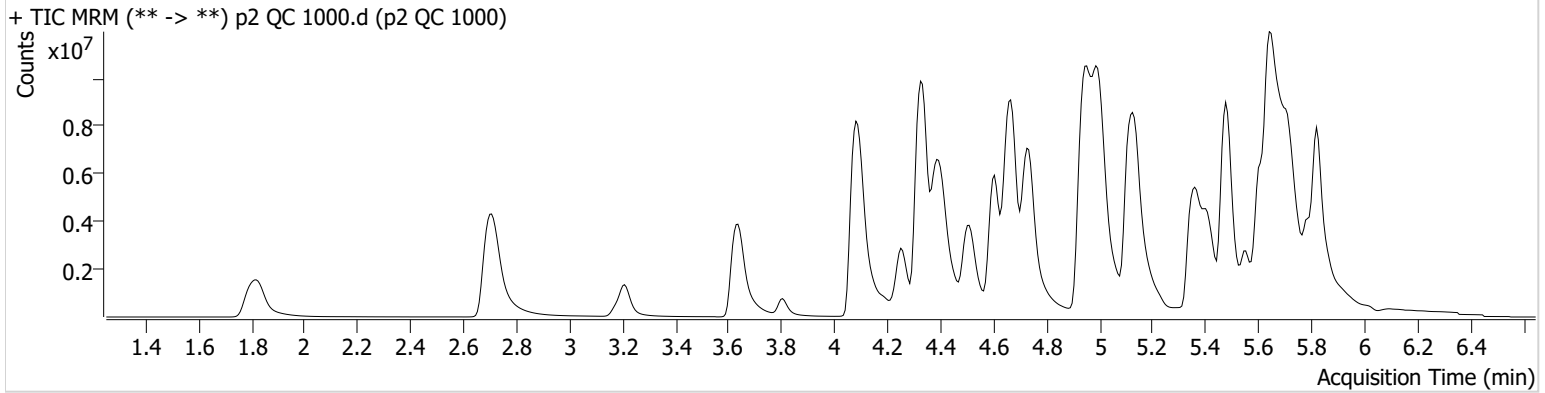


AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument	Falco (069901)	Data File	p2 QC 1000.d
Type	QC	Sample	p2 QC 1000
Acq. Method	AM 28 MDQ P2 061022.m	Operator	Amber Gerheart
Sample Position	P2-D2	Comment	
Injection Volume	5		
Acq. Date-Time	8/10/2022 6:26:41 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
10-OH-Carbazepine	5.004	9271299	26960.15	85.2	41165.05	319428	1022.3989 ng/ml
* 7-aminoflunitrazepam	4.639	3608902		25.5	∞	350110	586.8312 ng/ml
9-Hydroxyrisperidone	4.664	668915		3383.0	∞	712624	1023.4635 ng/ml
* alpha-hydroxymidazolam	5.805	1152490	1198.42	65.9	890.33	30147	1756.4950 ng/ml
Amitriptyline	5.692	3118195		220.4	33823.30	158216	1062.7081 ng/ml
Duloxetine	5.664	262853	52.39	13.2	182.71	14341	950.7692 ng/ml
* Flurazepam	5.351	12283908		13.6	32733.74	350110	750.2797 ng/ml
* Hydroxyzine	5.709	7065701	3632.93	74.7	74038.58	411838	777.6016 ng/ml
Midazolam	5.799	773402	172.50	88.9	141.12	120295	976.2677 ng/ml

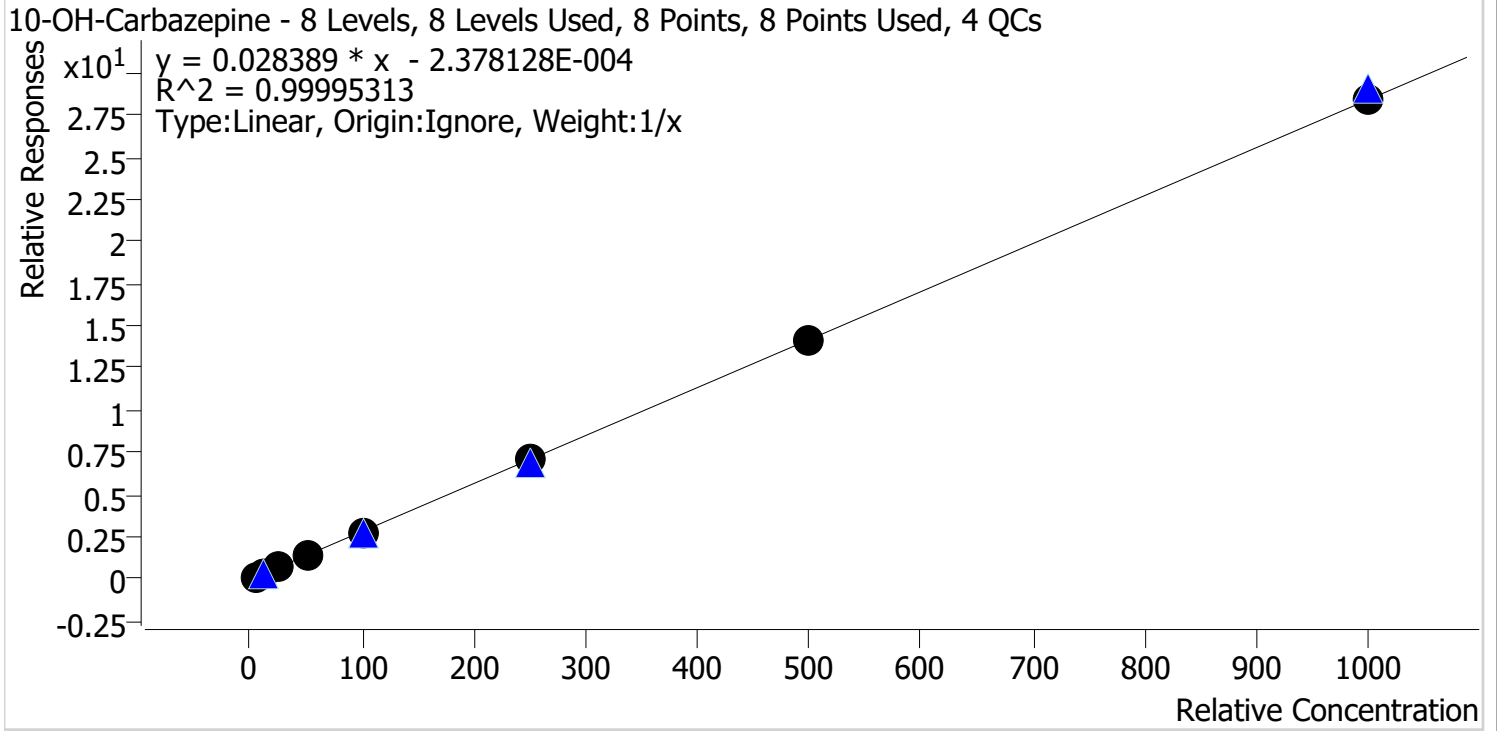
*Outside curve range

AM TS



AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Last Cal. Update 8/11/2022 1:40 PM
Analyst Name ISP\agerheart
Analyte 10-OH-Carbazepine **Internal Standard** 10-OH-Carbazepine-13-D6



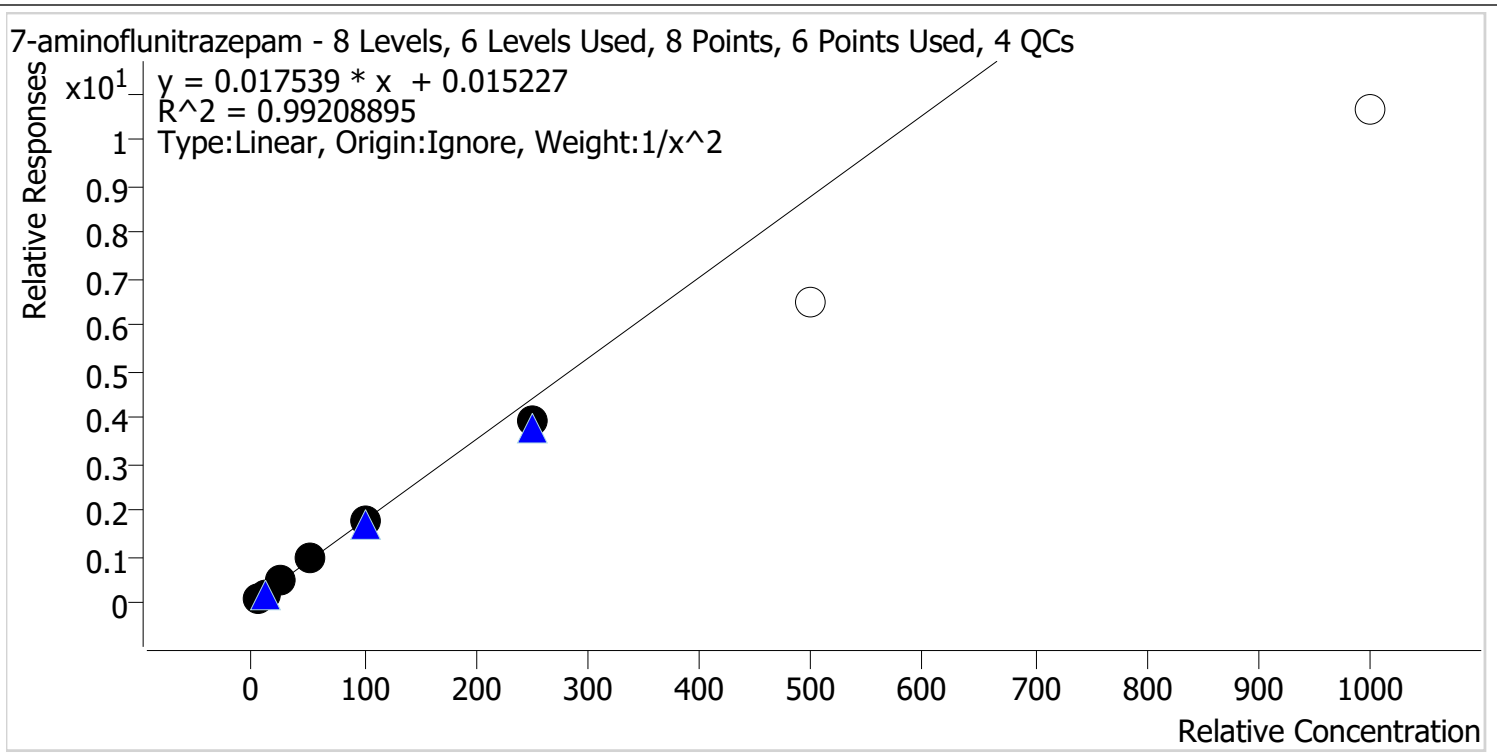
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	5.0	99.2
p2 Cal 2-10ng	2	✓	10.0	10.3	102.6
p2 Cal 3 -25ng	3	✓	25.0	24.5	97.9
p2 Cal 4-50ng	4	✓	50.0	49.9	99.7
p2 Cal 5-100ng	5	✓	100.0	99.6	99.6
p2 Cal 6-250ng	6	✓	250.0	253.5	101.4
p2 Cal 7-500ng	7	✓	500.0	497.4	99.5
p2 Cal 8-1000ng	8	✓	1000.0	999.9	100.0

AM TS



AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Last Cal. Update 8/11/2022 1:40 PM
Analyst Name ISP\agerheart
Analyte 7-aminoflunitrazepam **Internal Standard** 7-aminoflunitrazepam-D7



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	4.7	94.8
p2 Cal 2-10ng	2	✓	10.0	10.8	107.9
p2 Cal 3 -25ng	3	✓	25.0	26.4	105.6
p2 Cal 4-50ng	4	✓	50.0	52.4	104.7
p2 Cal 5-100ng	5	✓	100.0	97.6	97.6
p2 Cal 6-250ng	6	✓	250.0	223.2	89.3
p2 Cal 7-500ng	7	✗	500.0	368.1	73.6
p2 Cal 8-1000ng	8	✗	1000.0	606.1	60.6

Cal 7 and 8 dropped due to accuracy

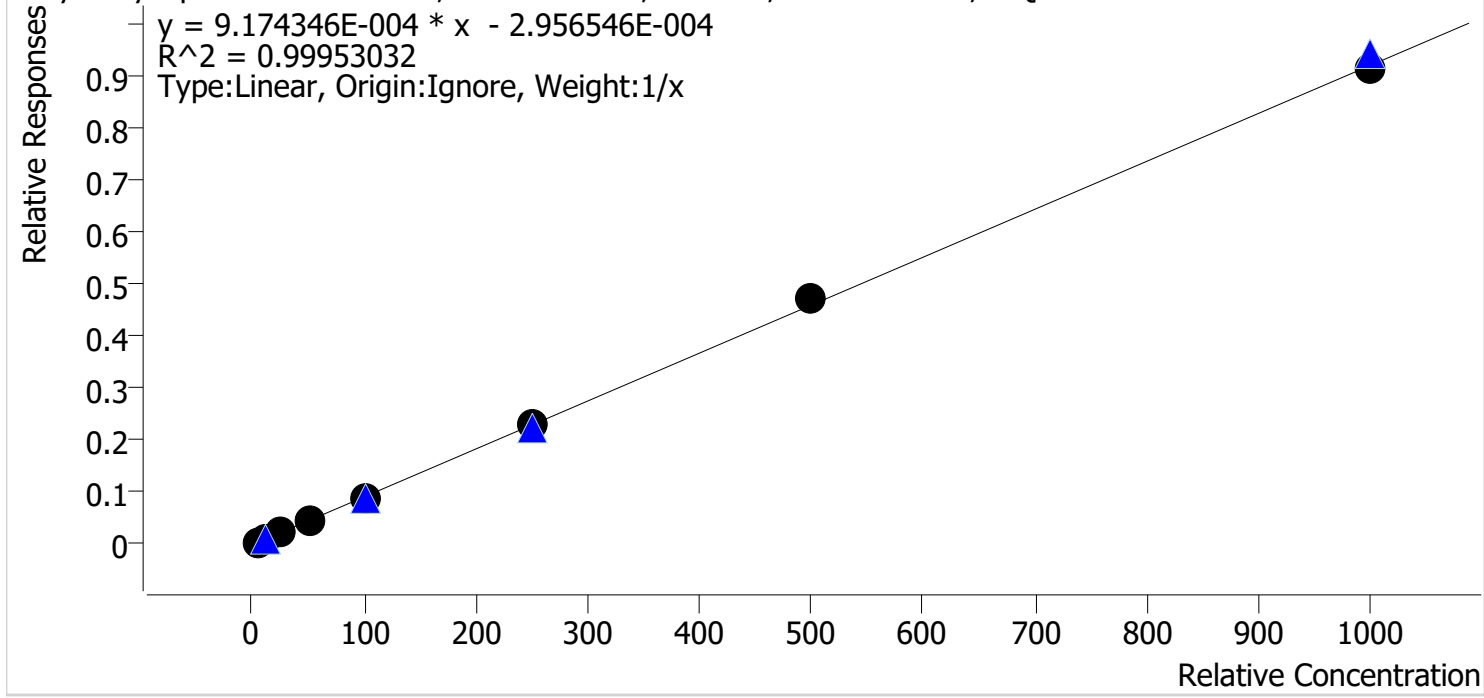
AM TS



AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Last Cal. Update 8/11/2022 1:40 PM
Analyst Name ISP\agerheart
Analyte 9-Hydroxyrisperidone **Internal Standard** 9-OH-Respiridone-D4

9-Hydroxyrisperidone - 8 Levels, 8 Levels Used, 8 Points, 8 Points Used, 4 QCs



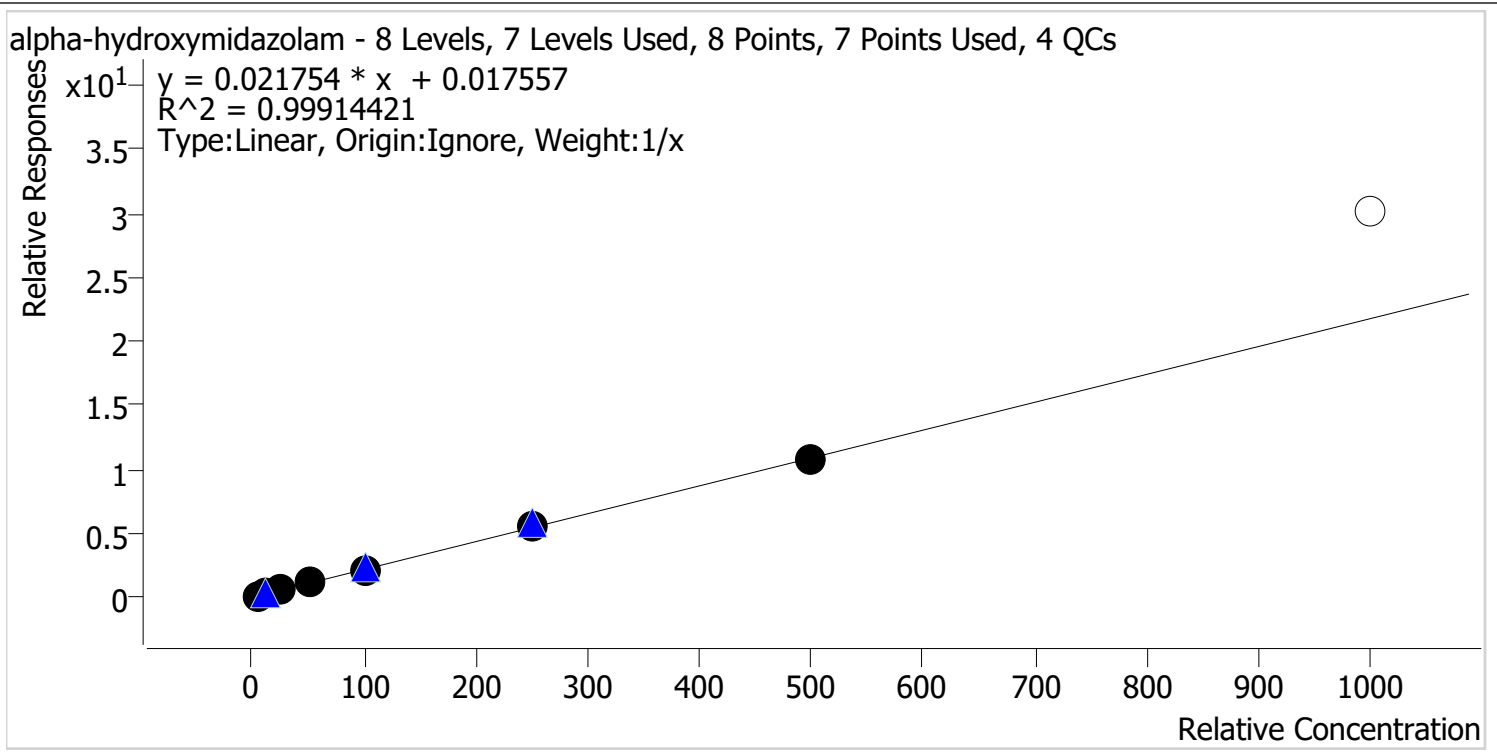
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	5.0	100.9
p2 Cal 2-10ng	2	✓	10.0	10.5	105.4
p2 Cal 3 -25ng	3	✓	25.0	24.8	99.1
p2 Cal 4-50ng	4	✓	50.0	49.1	98.2
p2 Cal 5-100ng	5	✓	100.0	94.9	94.9
p2 Cal 6-250ng	6	✓	250.0	248.5	99.4
p2 Cal 7-500ng	7	✓	500.0	515.0	103.0
p2 Cal 8-1000ng	8	✓	1000.0	992.2	99.2

AM TS



AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Last Cal. Update 8/11/2022 1:40 PM
Analyst Name ISP\agerheart
Analyte alpha-hydroxymidazolam **Internal Standard** alpha-hydroxymidazolam-D4



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	4.5	90.4
p2 Cal 2-10ng	2	✓	10.0	10.2	101.5
p2 Cal 3 -25ng	3	✓	25.0	25.5	102.0
p2 Cal 4-50ng	4	✓	50.0	52.7	105.5
p2 Cal 5-100ng	5	✓	100.0	99.5	99.5
p2 Cal 6-250ng	6	✓	250.0	258.1	103.2
p2 Cal 7-500ng	7	✓	500.0	489.5	97.9
p2 Cal 8-1000ng	8	✗	1000.0	1384.8	138.5

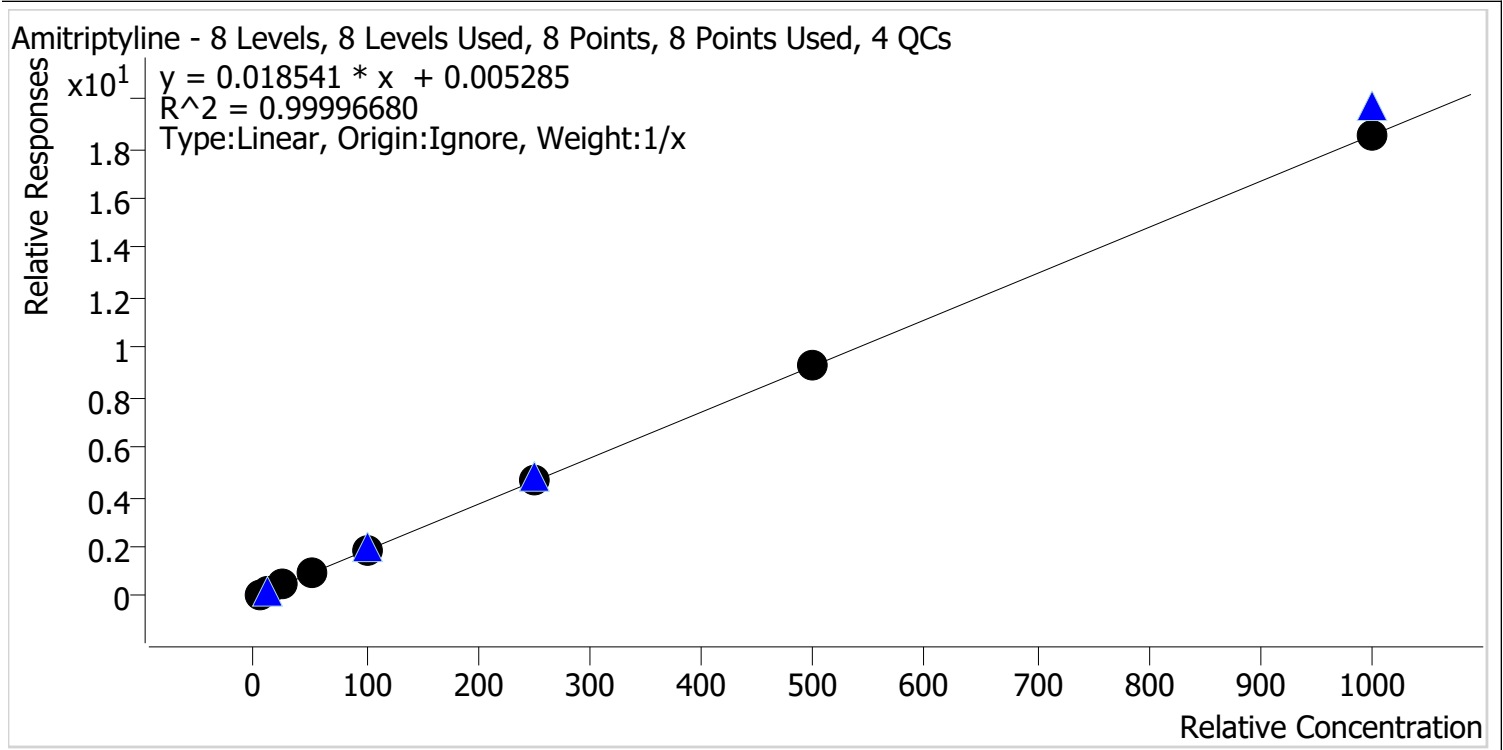
Cal 8 dropped due to accuracy

AM TS



AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Last Cal. Update 8/11/2022 1:40 PM
Analyst Name ISP\agerheart
Analyte Amitriptyline **Internal Standard** Amitriptyline-D3



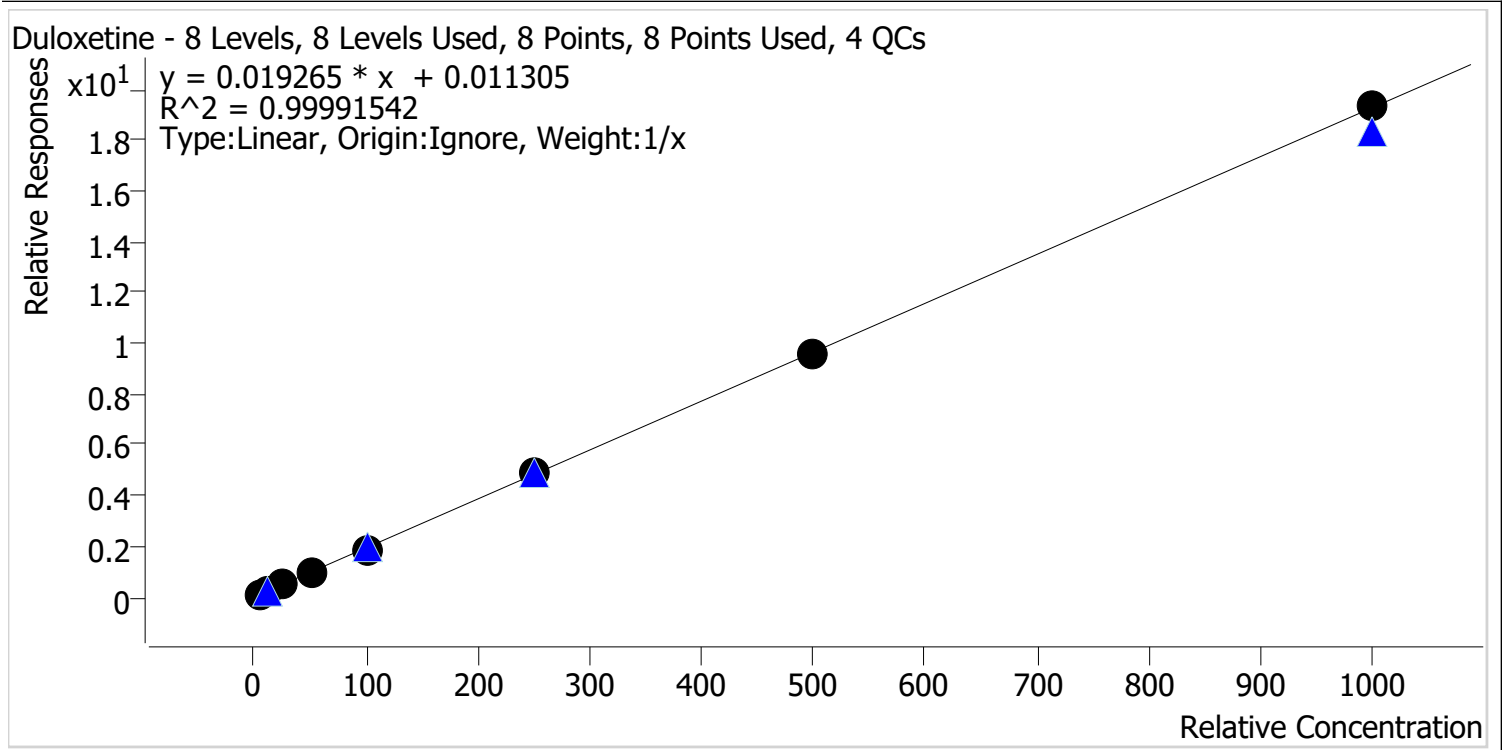
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	4.9	98.2
p2 Cal 2-10ng	2	✓	10.0	10.1	100.8
p2 Cal 3 -25ng	3	✓	25.0	24.5	98.2
p2 Cal 4-50ng	4	✓	50.0	50.5	101.0
p2 Cal 5-100ng	5	✓	100.0	101.9	101.9
p2 Cal 6-250ng	6	✓	250.0	250.2	100.1
p2 Cal 7-500ng	7	✓	500.0	500.3	100.1
p2 Cal 8-1000ng	8	✓	1000.0	997.5	99.8

AM TS



AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Last Cal. Update 8/11/2022 1:40 PM
Analyst Name ISP\agerheart
Analyte Duloxetine **Internal Standard** Duloxetine-d3



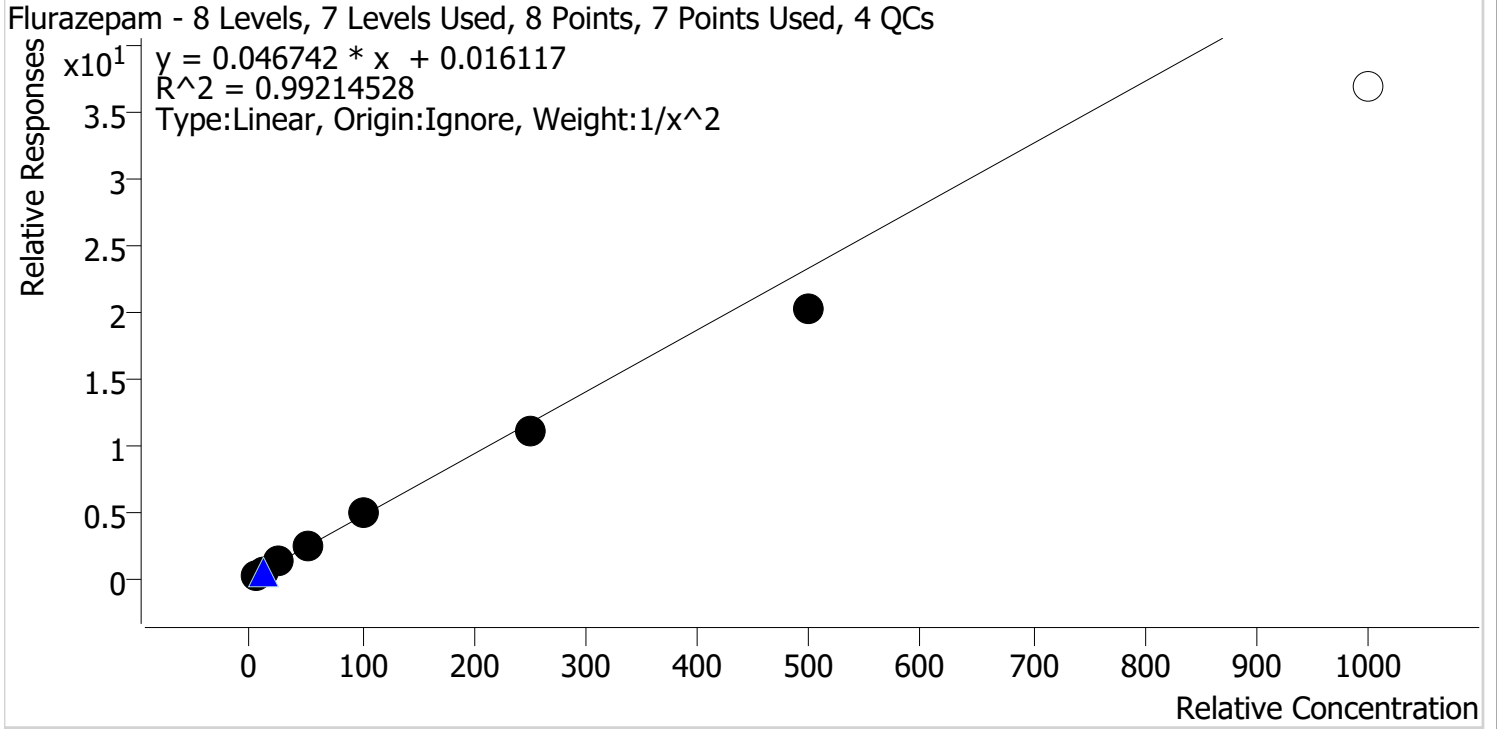
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	4.7	95.0
p2 Cal 2-10ng	2	✓	10.0	10.6	106.1
p2 Cal 3 -25ng	3	✓	25.0	24.8	99.4
p2 Cal 4-50ng	4	✓	50.0	50.6	101.2
p2 Cal 5-100ng	5	✓	100.0	98.0	98.0
p2 Cal 6-250ng	6	✓	250.0	251.9	100.8
p2 Cal 7-500ng	7	✓	500.0	496.3	99.3
p2 Cal 8-1000ng	8	✓	1000.0	1003.0	100.3

AM TS



AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Last Cal. Update 8/11/2022 1:40 PM
Analyst Name ISP\agerheart
Analyte Flurazepam **Internal Standard** 7-aminoflunitrazepam-D7



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	4.8	95.9
p2 Cal 2-10ng	2	✓	10.0	10.5	104.5
p2 Cal 3 -25ng	3	✓	25.0	26.2	104.9
p2 Cal 4-50ng	4	✓	50.0	54.5	109.1
p2 Cal 5-100ng	5	✓	100.0	103.1	103.1
p2 Cal 6-250ng	6	✓	250.0	238.1	95.2
p2 Cal 7-500ng	7	✓	500.0	436.2	87.2
p2 Cal 8-1000ng	8	✗	1000.0	791.4	79.1

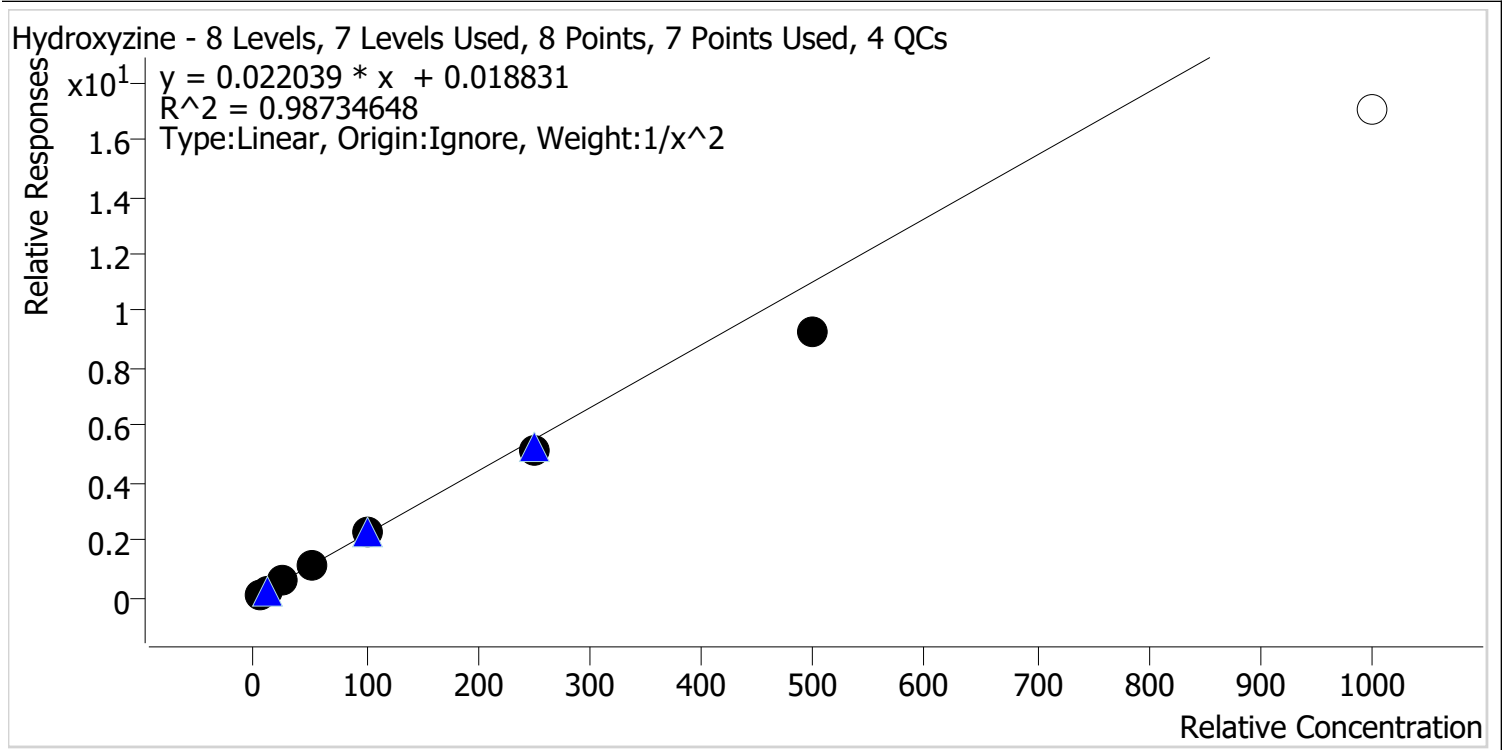
Cal 8 dropped due to accuracy

AM TS



AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Last Cal. Update 8/11/2022 1:40 PM
Analyst Name ISP\agerheart
Analyte Hydroxyzine **Internal Standard** Clozapine-D4



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	4.7	93.8
p2 Cal 2-10ng	2	✓	10.0	10.8	107.6
p2 Cal 3 -25ng	3	✓	25.0	27.4	109.5
p2 Cal 4-50ng	4	✓	50.0	52.5	105.1
p2 Cal 5-100ng	5	✓	100.0	106.4	106.4
p2 Cal 6-250ng	6	✓	250.0	234.6	93.8
p2 Cal 7-500ng	7	✓	500.0	419.6	83.9
p2 Cal 8-1000ng	8	x	1000.0	775.0	77.5

Cal 8 dropped due to accuracy

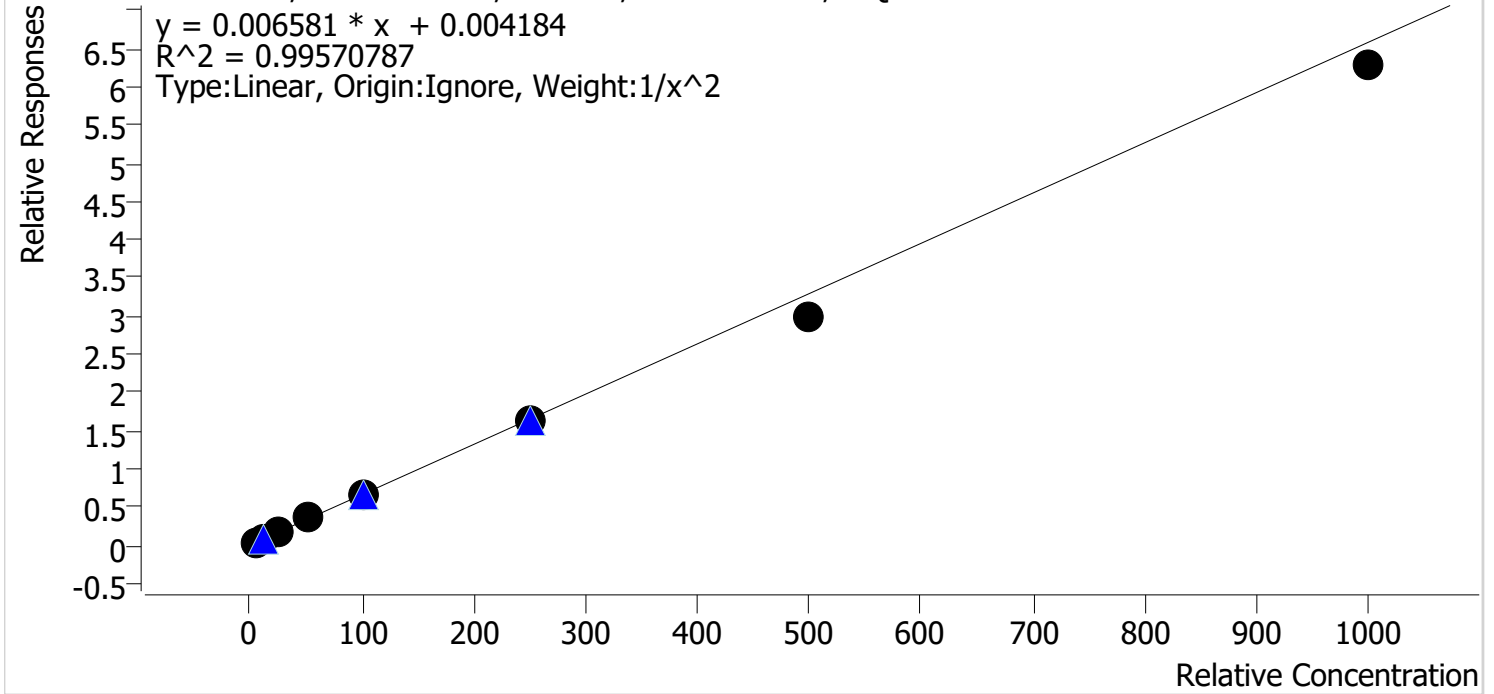
AM TS



AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Last Cal. Update 8/11/2022 1:40 PM
Analyst Name ISP\agerheart
Analyte Midazolam **Internal Standard** Midazolam-D4

Midazolam - 8 Levels, 8 Levels Used, 8 Points, 8 Points Used, 4 QCs



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	4.8	95.3
p2 Cal 2-10ng	2	✓	10.0	10.7	106.8
p2 Cal 3 -25ng	3	✓	25.0	25.9	103.5
p2 Cal 4-50ng	4	✓	50.0	53.4	106.8
p2 Cal 5-100ng	5	✓	100.0	101.1	101.1
p2 Cal 6-250ng	6	✓	250.0	249.1	99.6
p2 Cal 7-500ng	7	✓	500.0	455.2	91.0
p2 Cal 8-1000ng	8	✓	1000.0	958.0	95.8

AM TS

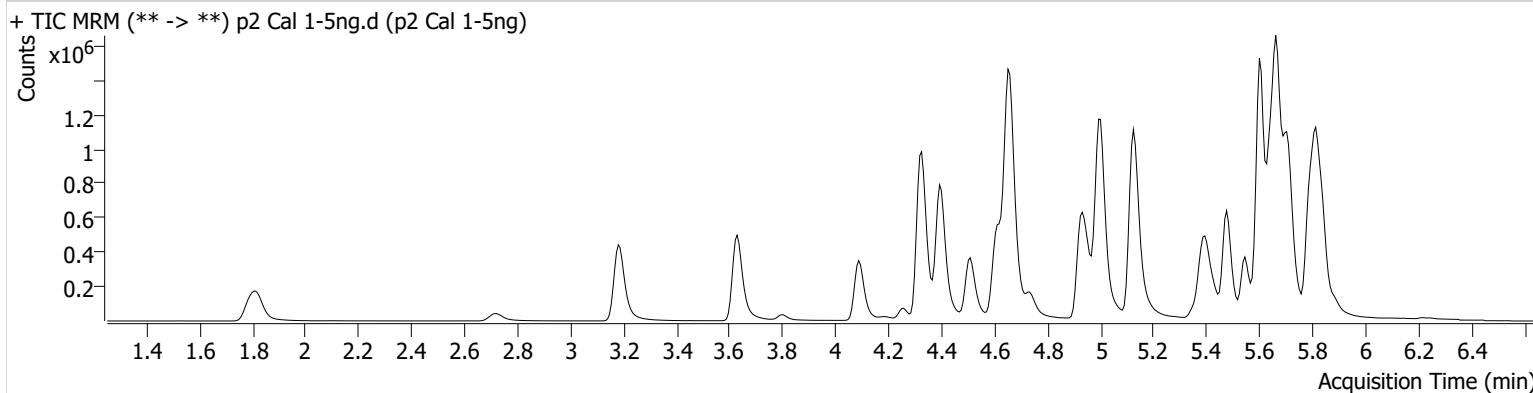


AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument	Falco (069901)	Data File	p2 Cal 1-5ng.d
Type	Cal	Sample	p2 Cal 1-5ng
Acq. Method	AM 28 MDQ P2 061022.m	Operator	Amber Gerheart
Sample Position	P2-A1	Comment	
Injection Volume	5		
Acq. Date-Time	8/10/2022 3:45:46 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
10-OH-Carbazepine	5.004	184708	1800.26	84.6	2617.07	1313869	4.9604 ng/ml
7-aminoflunitrazepam	4.646	57990	395.75	24.1	1207.83	589736	4.7382 ng/ml
9-Hydroxyrisperidone	4.664	8782		3236.6	180092.07	2027291	5.0441 ng/ml
alpha-hydroxymidazolam	5.805	56794	985.64	67.3	570.11	490150	4.5192 ng/ml
Amitriptyline	5.699	58043	11005.85	257.8	503.40	602396	4.9119 ng/ml
Duloxetine	5.664	11459	562.67	12.4	40.34	111460	4.7498 ng/ml
Flurazepam	5.352	141700	432.37	12.2	∞	589736	4.7956 ng/ml
Hydroxyzine	5.709	138301	603.95	71.6	3328.30	1132295	4.6876 ng/ml
Midazolam	5.792	22144	828.48	97.8	334.11	623217	4.7633 ng/ml

AM TS

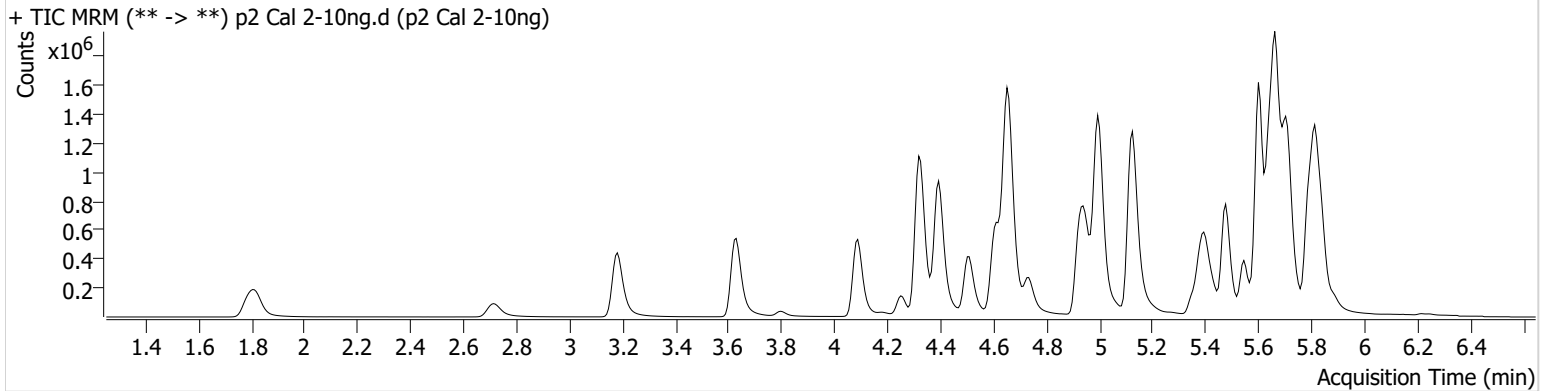


AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument	Falco (069901)	Data File	p2 Cal 2-10ng.d
Type	Cal	Sample	p2 Cal 2-10ng
Acq. Method	AM 28 MDQ P2 061022.m	Operator	Amber Gerheart
Sample Position	P2-B1	Comment	
Injection Volume	5		
Acq. Date-Time	8/10/2022 3:56:38 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
10-OH-Carbazepine	4.997	370396	237.07	87.3	1477.13	1272209	10.2639 ng/ml
7-aminoflunitrazepam	4.646	120223	5264.28	25.2	651.73	587745	10.7941 ng/ml
9-Hydroxyrisperidone	4.664	18726	146.67	3075.3	735.99	1998357	10.5361 ng/ml
alpha-hydroxymidazolam	5.805	111224	9716.58	66.9	981.13	466505	10.1526 ng/ml
Amitriptyline	5.699	119178	765.35	256.6	2732.50	620243	10.0786 ng/ml
Duloxetine	5.664	24193	580.09	11.5	66.44	112182	10.6071 ng/ml
Flurazepam	5.352	296658	1438.36	12.3	16321.93	587745	10.4535 ng/ml
Hydroxyzine	5.709	285374	790.63	72.2	833.41	1114529	10.7635 ng/ml
Midazolam	5.792	45179	719.64	89.4	2407.79	606587	10.6814 ng/ml

AM TS

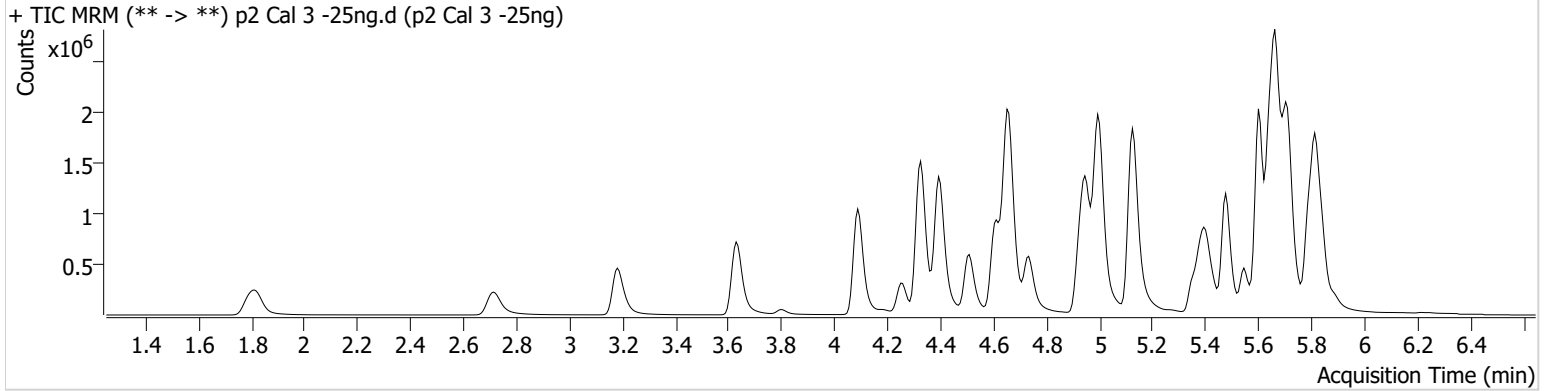


AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument Falco (069901) **Data File** p2 Cal 3 -25ng.d
Type Cal **Sample** p2 Cal 3 -25ng
Acq. Method AM 28 MDQ P2 061022.m **Operator** Amber Gerheart
Sample Position P2-C1 **Comment**
Injection Volume 5
Acq. Date-Time 8/10/2022 4:07:20 PM
Sample Info.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
10-OH-Carbazepine	4.997	875216		87.6	1028.58	1259782	24.4803 ng/ml
7-aminoflunitrazepam	4.646	283909	568.20	25.3	451.47	593498	26.4055 ng/ml
9-Hydroxyrisperidone	4.664	46833	6286.00	3006.0	4315.41	2087785	24.7727 ng/ml
alpha-hydroxymidazolam	5.805	255190	2561.36	65.8	1442.34	445988	25.4953 ng/ml
Amitriptyline	5.699	280578	905.87	258.1	8533.76	609608	24.5394 ng/ml
Duloxetine	5.664	53177	264.39	12.7	189.71	108525	24.8473 ng/ml
Flurazepam	5.352	737002	5742.00	12.9	25559.19	593498	26.2220 ng/ml
Hydroxyzine	5.709	694320	1694.95	71.9	1852.08	1116426	27.3641 ng/ml
Midazolam	5.792	105062	2295.16	90.6	4639.37	601963	25.8839 ng/ml

AM TS

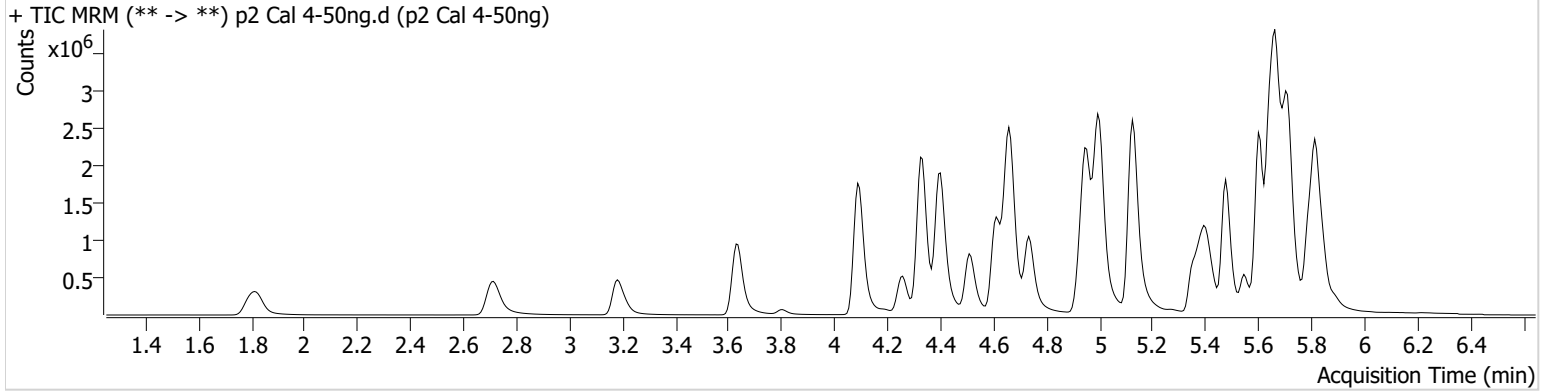


AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument Falco (069901) **Data File** p2 Cal 4-50ng.d
Type Cal **Sample** p2 Cal 4-50ng
Acq. Method AM 28 MDQ P2 061022.m **Operator** Amber Gerheart
Sample Position P2-D1 **Comment**
Injection Volume 5
Acq. Date-Time 8/10/2022 4:18:03 PM
Sample Info.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
10-OH-Carbazepine	5.004	1585326	6013.47	86.7	21679.56	1119861	49.8742 ng/ml
7-aminoflunitrazepam	4.646	524498	1128.31	24.9	464.96	561779	52.3625 ng/ml
9-Hydroxyrisperidone	4.664	87129	1519.80	3166.8	202919.70	1947759	49.0808 ng/ml
alpha-hydroxymidazolam	5.805	445205	1788.01	64.8	1288.50	382224	52.7350 ng/ml
Amitriptyline	5.699	527795	625.95	250.3	11173.51	560519	50.5018 ng/ml
Duloxetine	5.664	94632	423.92	13.1	2025.76	95927	50.6190 ng/ml
Flurazepam	5.352	1441322	61989.98	12.7	25999.66	561779	54.5442 ng/ml
Hydroxyzine	5.709	1278160	5034.98	73.3	18180.57	1086319	52.5323 ng/ml
Midazolam	5.792	188115	1492.44	91.0	938.52	528834	53.4145 ng/ml

AM TS

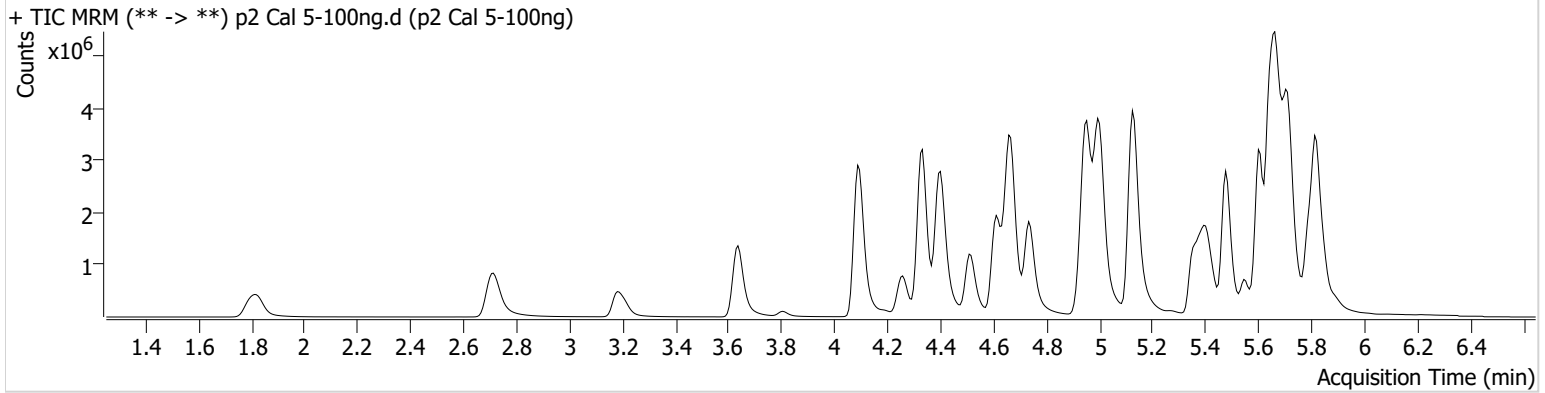


AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument	Falco (069901)	Data File	p2 Cal 5-100ng.d
Type	Cal	Sample	p2 Cal 5-100ng
Acq. Method	AM 28 MDQ P2 061022.m	Operator	Amber Gerheart
Sample Position	P2-E1	Comment	
Injection Volume	5		
Acq. Date-Time	8/10/2022 4:28:45 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
10-OH-Carbazepine	5.004	2658061	12939.48	86.3	16095.91	939983	99.6162 ng/ml
7-aminoflunitrazepam	4.646	954731	2836.42	25.8	1508.19	552529	97.6485 ng/ml
9-Hydroxyrisperidone	4.664	156935	5614.94	3272.6	137316.85	1809082	94.8777 ng/ml
alpha-hydroxymidazolam	5.805	647426	7198.98	67.2	660.58	296700	99.4985 ng/ml
Amitriptyline	5.692	961091	1578.20	238.6	17237.47	507216	101.9143 ng/ml
Duloxetine	5.664	160826	429.33	12.8	231.30	84681	97.9935 ng/ml
Flurazepam	5.352	2672240	34191.21	13.3	4291.33	552529	103.1242 ng/ml
Hydroxyzine	5.709	2235760	38043.51	74.3	∞	946274	106.3502 ng/ml
Midazolam	5.799	302425	1047.07	88.7	1256.55	451794	101.0757 ng/ml

AM TS

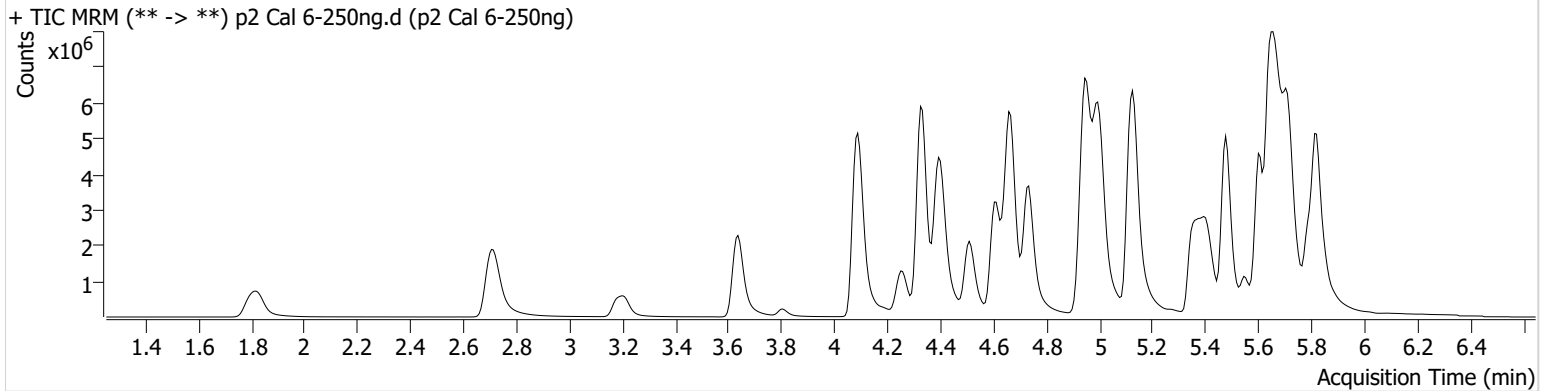


AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument	Falco (069901)	Data File	p2 Cal 6-250ng.d
Type	Cal	Sample	p2 Cal 6-250ng
Acq. Method	AM 28 MDQ P2 061022.m	Operator	Amber Gerheart
Sample Position	P2-F1	Comment	
Injection Volume	5		
Acq. Date-Time	8/10/2022 4:39:27 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
10-OH-Carbazepine	5.004	4890860	10628.51	86.1	37935.19	679614	253.5045 ng/ml
7-aminoflunitrazepam	4.639	1951865		25.8	4367.36	496546	223.2488 ng/ml
9-Hydroxyrisperidone	4.664	325498	466.00	3376.5	96857.35	1429467	248.5209 ng/ml
alpha-hydroxymidazolam	5.805	944010		66.2	3671.67	167604	258.1006 ng/ml
Amitriptyline	5.692	1687856	1365.73	233.8	780.65	363413	250.2174 ng/ml
Duloxetine	5.664	241251	193.10	13.1	292.19	49598	251.8926 ng/ml
Flurazepam	5.352	5533126	218294.26	13.8	20555.52	496546	238.0526 ng/ml
Hydroxyzine	5.709	4022732	280647.55	75.0	∞	775344	234.5594 ng/ml
Midazolam	5.799	517955	854.92	88.6	477.89	315121	249.1152 ng/ml

AM TS

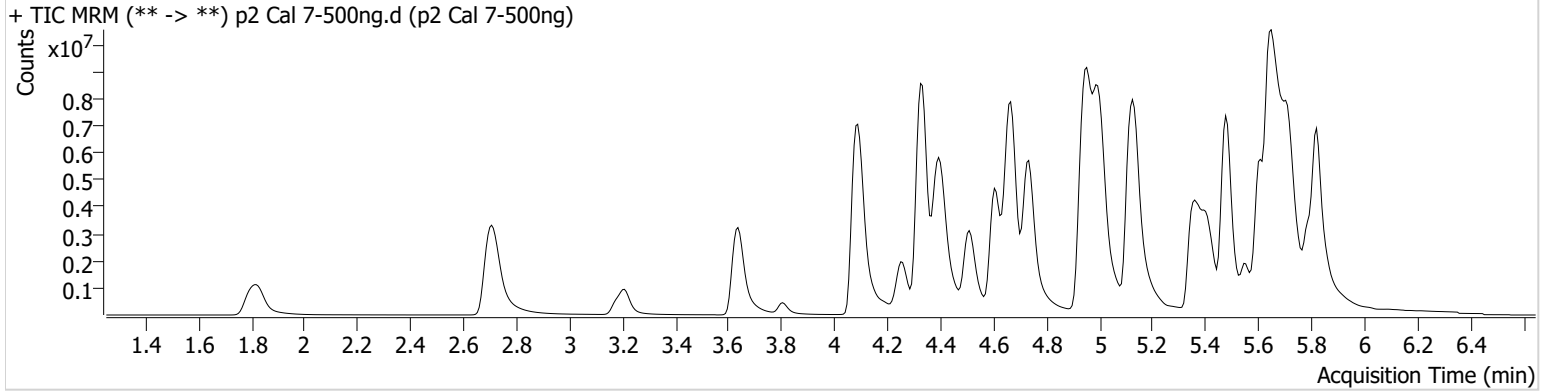


AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument	Falco (069901)	Data File	p2 Cal 7-500ng.d
Type	Cal	Sample	p2 Cal 7-500ng
Acq. Method	AM 28 MDQ P2 061022.m	Operator	Amber Gerheart
Sample Position	P2-G1	Comment	
Injection Volume	5		
Acq. Date-Time	8/10/2022 4:50:09 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
10-OH-Carbazepine	5.004	7194838	13265.13	85.4	144762.56	509576	497.3570 ng/ml
7-aminoflunitrazepam	4.639	2911188		26.4	∞	449882	368.0720 ng/ml
9-Hydroxyrisperidone	4.664	533198		3300.7	∞	1129183	515.0167 ng/ml
alpha-hydroxymidazolam	5.805	1043197	195.39	67.2	664.45	97803	489.4989 ng/ml
Amitriptyline	5.692	2466249	586.19	229.9	28871.80	265728	500.2983 ng/ml
Duloxetine	5.664	256019	685.45	13.2	441.12	26747	496.2588 ng/ml
Flurazepam	5.352	9178834		13.5	989.85	449882	436.1502 ng/ml
Hydroxyzine	5.709	5780518	40852.42	75.8	∞	623819	419.5943 ng/ml
Midazolam	5.799	669139	288.53	89.1	236.91	223066	455.1659 ng/ml

AM TS

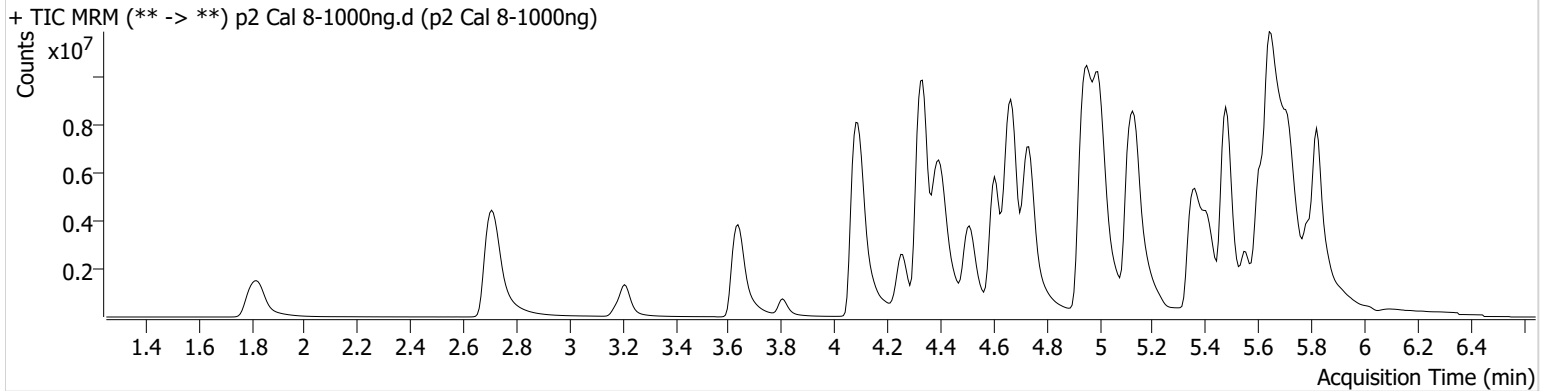


AM #28 Multi-Drug Quant. Results

Batch results G:\TOX\Pocatello\Falco\2022\AM 27-28\081022 AM 28 P2 AG TS\QuantResults\AM 28 P2 compounds evaluated.batch.bin
Calibration Last Update 8/11/2022 1:40:05 PM

Instrument	Falco (069901)	Data File	p2 Cal 8-1000ng.d
Type	Cal	Sample	p2 Cal 8-1000ng
Acq. Method	AM 28 MDQ P2 061022.m	Operator	Amber Gerheart
Sample Position	P2-H1	Comment	
Injection Volume	5		
Acq. Date-Time	8/10/2022 5:00:52 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
10-OH-Carbazepine	5.004	8955828	16976.76	85.0	118224.89	315488	999.9434 ng/ml
7-aminoflunitrazepam	4.639	3485850		26.1	∞	327426	606.1190 ng/ml
9-Hydroxyrisperidone	4.664	654934		3394.0	∞	719757	992.1509 ng/ml
alpha-hydroxymidazolam	5.805	1102311	138.37	66.6	372.29	36570	1384.7753 ng/ml
Amitriptyline	5.692	2945025	617.81	219.1	23950.09	159189	997.5383 ng/ml
Duloxetine	5.664	263834	41.39	13.0	101.67	13645	1003.0319 ng/ml
Flurazepam	5.345	12116941	562.91	13.2	∞	327426	791.3721 ng/ml
Hydroxyzine	5.709	6869505	46015.02	72.4	24869.13	401767	774.9579 ng/ml
Midazolam	5.799	751545	1925.17	90.0	70.44	119123	957.9934 ng/ml