

**Worklist: 6974**

<u>LAB_CASE</u>	<u>ITEM</u>	<u>ITEM_TYPE</u>	<u>DESCRIPTION</u>	
C2024-2122	1	BCK	AM 28 Blood Multi-Drug Quant Panel 1 by LC-QQQ	
C2024-2138	2	BCK	AM 28 Blood Multi-Drug Quant Panel 1 by LC-QQQ	
C2024-2151	1	BCK	AM 28 Blood Multi-Drug Quant Panel 1 by LC-QQQ	
C2024-2165	1	BCK	AM 28 Blood Multi-Drug Quant Panel 1 by LC-QQQ	
C2024-2178	1	BCK	AM 28 Blood Multi-Drug Quant Panel 1 by LC-QQQ	
C2024-2189	1	BCK	AM 28 Blood Multi-Drug Quant Panel 1 by LC-QQQ	
C2024-2191	1	BCK	AM 28 Blood Multi-Drug Quant Panel 1 by LC-QQQ	
C2024-2192	1	BCK	AM 28 Blood Multi-Drug Quant Panel 1 by LC-QQQ	
C2024-2193	1	BCK	AM 28 Blood Multi-Drug Quant Panel 1 by LC-QQQ	
C2024-2198	2	BCK	AM 28 Blood Multi-Drug Quant Panel 1 by LC-QQQ	
C2024-2229	1	BCK	AM 28 Blood Multi-Drug Quant Panel 1 by LC-QQQ	
C2024-2232	1	BCK	AM 28 Blood Multi-Drug Quant Panel 1 by LC-QQQ	

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

Extraction Date: 10/29/24

Plate lot 240923

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

Blank Blood Lot: 24C52044

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

Analyst: Anne Nord

Plate Retest Date: 3/23/2025

Mobile phase B: 0.01% Formic Acid in MeOH

Blank Urine Lot: Blood only

LCMS-QQQ ID: 69679

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.

Analytic:

- ☒ 1. Remove standards, plate, controls, and samples from cold storage. Allow to reach room temperature.
- ☒ 2. Using a calibrated pipette, pipette **250µL blood and urine** (if applicable) into wells of analytical (standards) plate. **Pipette ID: 390993** **Urine Hydrolysis: add 250µL urine, 40µL BG Turbo, and 100µL Instant Buffer I. Place on plate shaker for 5 minutes**
- ☒ 3. Pipette **250µL 0.5 M ammonium hydroxide** in wells of analytical plate.
- ☒ 4. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- ☒ 5. Transfer **200-450µL of blood+base and urine+base (if applicable)** mixture to corresponding wells of SLE+ plate. Amount transferred: *250*
- ☒ 6. 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).**
- ☒ 7. Wait 5 minutes.
- ☒ 8. Add **900uL ethyl acetate.**
- ☒ 9. Wait 5 minutes.
- ☒ 10. Apply positive pressure for approx. 15 seconds. **(10-15 PSI- Selector to the left).**
- ☒ 11. Add **900uL ethyl acetate.**
- ☒ 12. Wait 5 minutes.
- ☒ 13. Apply positive pressure for approx. 15 seconds. **(10-15 PSI- Selector to the left).**
- ☒ 14. Remove plate containing eluate. Place on SPE Dry 75401 and evaporate to dryness at approx. 35°C. ☒ **If run contains urine or at the analyst's discretion, add 50µL 1% HCl in MeOH to wells and place plate cover on plate before drying (optional).**
- ☒ 15. Reconstitute in **100µL 20% LC MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

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

limitations

7-Aminoclonazepam	
Amphetamine	5-250 cal 7 and 8 dropped due to accuracy
Bromazolam	
Buprenorphine	
Clonazepam	
Duloxetine	
Hydroxyzine	
Lamotrigine	50-500 cal 5, 6,7 and 8 dropped due to accuracy. Qualitative
Methamphetamine	5-500 cal 8 dropped due to accuracy



Mitragynine	
Norbuprenorphine	1-100 cal 1 dropped due to poor peak shape/response, qualitative from 1-2.5 due to accuracy of 1ng quality control
O-desmethyiltramadol	
Sertraline	
Tramadol	

C2024-2198-2 followed a sample that was positive for some of the same compounds, that injection was not evaluated. It was reinjected following a sample that was did not have the same compounds. That injection was evaluated.



	1	2	3	4	5	6	7	8	9	10	11	12
A	IS + Cal. 1	IS + QC_1	2191-1	2232-1								
B	IS + Cal. 2	IS + QC_2	2193-1	2178-1								
C	IS + Cal. 3	IS + QC 3	2151-1									
D	IS + Cal. 4	IS + QC_4	2229-1									
E	IS + Cal. 5		2165-1									
F	IS + Cal. 6	negative blood	2198-2									
G	IS + Cal. 7	2138-2	2189-1									
H	IS + Cal. 8	2122-1	2192-1									

blank in front

plate position 2

c2024-____-__

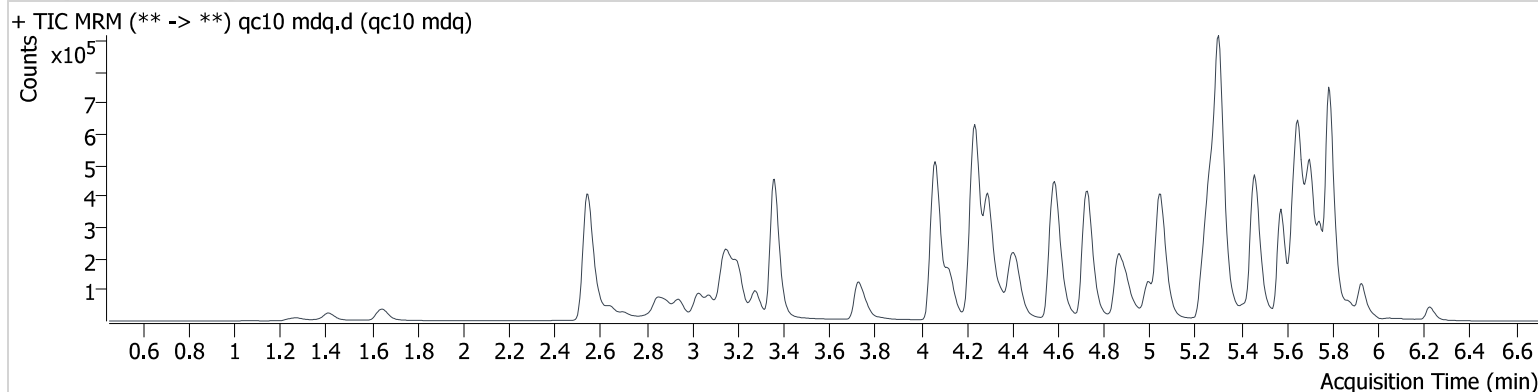
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Calibration Last Update 11/20/2024 1:35:03 PM

Instrument 69679
Type QC
Acq. Method mdqp1 121523.m
Sample Position P2-A2
Injection Volume 3
Acq. Date-Time 11/19/2024 2:01:58 PM
Sample Info.

Data File qc10 mdq.d
Sample qc10 mdq
Operator Anne Nord
Comment Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoclonazepam	4.265	23267	2052.3	112.26	∞	96839	9.963 ng/ml
Amphetamine	3.026	63029	303915.1	252.38	46527.2	184318	10.403 ng/ml
Bromazolam	5.791	18927	1903.2	96.45	338.7	70686	10.186 ng/ml
Buprenorphine	6.242	8779	402.3	16.83	142.1	103638	1.041 ng/ml
Clonazepam	5.589	5793	29892.0	31.60	∞	10959	10.596 ng/ml
Duloxetine	5.648	17754	6285.5	11.36	290.2	58799	10.166 ng/ml
Hydroxyzine	5.781	114015	8029.1	131.38	5873.4	1039161	9.672 ng/ml
Lamotrigine	4.354	82372	9767.4	94.12	6627168747 772.0	184318	106.681 ng/ml
Methamphetamine	3.205	193138	19613.0	37.75	2864.2	519027	10.590 ng/ml
Mitragynine	5.415	45371	26283.2	33.43	5395.7	704315	10.011 ng/ml
Norbuprenorphine	5.010	1009	132.0	109.58	381.1	12244	1.216 ng/ml
O-desmethyl-tramadol	3.366	230667	11566.2	6.45	7153.8	1053035	9.990 ng/ml
Sertraline	5.788	36469	11324.9	104.26	202017.5	143819	10.676 ng/ml
Tramadol	4.246	211368	2393.7	3.93	394.8	1036347	10.260 ng/ml

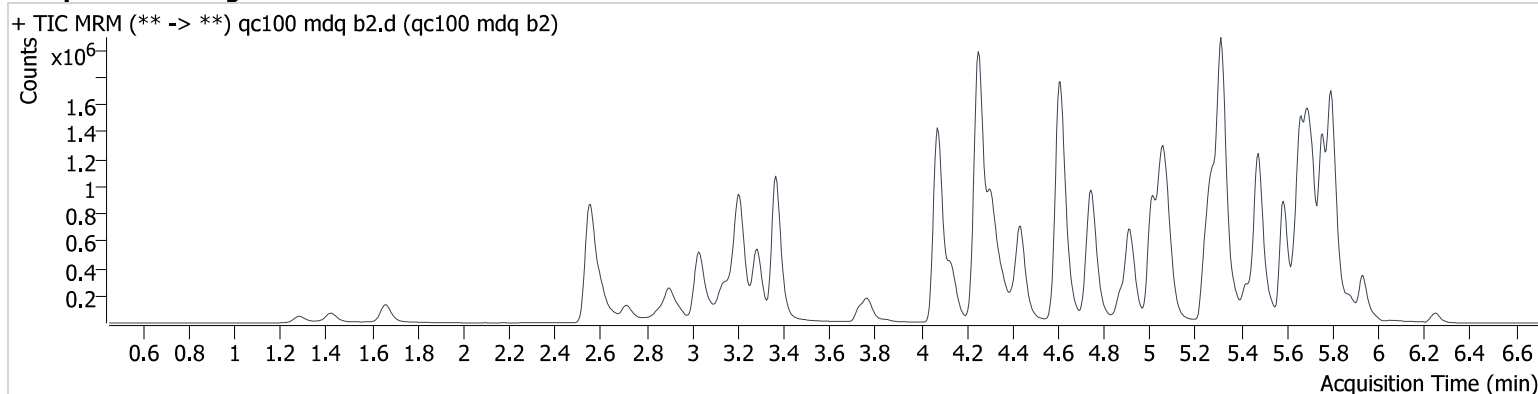
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Calibration Last Update 11/20/2024 1:35:03 PM

Instrument 69679
Type QC
Acq. Method mdqp1 121523.m
Sample Position P2-B2
Injection Volume 3
Acq. Date-Time 11/19/2024 4:54:34 PM
Sample Info.

Data File qc100 mdq b2.d
Sample qc100 mdq b2
Operator Anne Nord
Comment Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
7-aminoclonazepam	4.265	144503	1791802.2	105.87	231091.5	59606	92.233	ng/ml
Amphetamine	3.031	454986	20897.4	271.40	206156.1	147843	98.752	ng/ml
Bromazolam	5.791	121226	1987.2	101.86	2150.1	45310	95.924	ng/ml
Buprenorphine	6.253	87257	11623.7	16.06	1427.3	99280	10.273	ng/ml
Clonazepam	5.584	41664	41453.9	36.75	∞	7970	99.594	ng/ml
Duloxetine	5.653	101219	263.4	10.02	281.7	33374	98.383	ng/ml
Hydroxyzine	5.791	858984	85008.4	132.10	149531.2	764897	93.906	ng/ml
Lamotrigine	4.359	394149	∞	94.57	1325865.7	147843	669.511	ng/ml
Methamphetamine	3.210	1307840	32174.1	37.51	32697.3	432935	108.329	ng/ml
Mitragynine	5.420	436802	200464.3	29.15	119080.3	605759	98.094	ng/ml
Norbuprenorphine	5.015	5722	845.2	94.27	1590.0	9609	9.664	ng/ml
O-desmethyl-tramadol	3.366	2010399	739081.6	6.60	44309.6	908555	100.369	ng/ml
Sertraline	5.804	186193	∞	100.34	∞	77270	93.955	ng/ml
Tramadol	4.251	1747380	∞	4.06	∞	901734	96.796	ng/ml

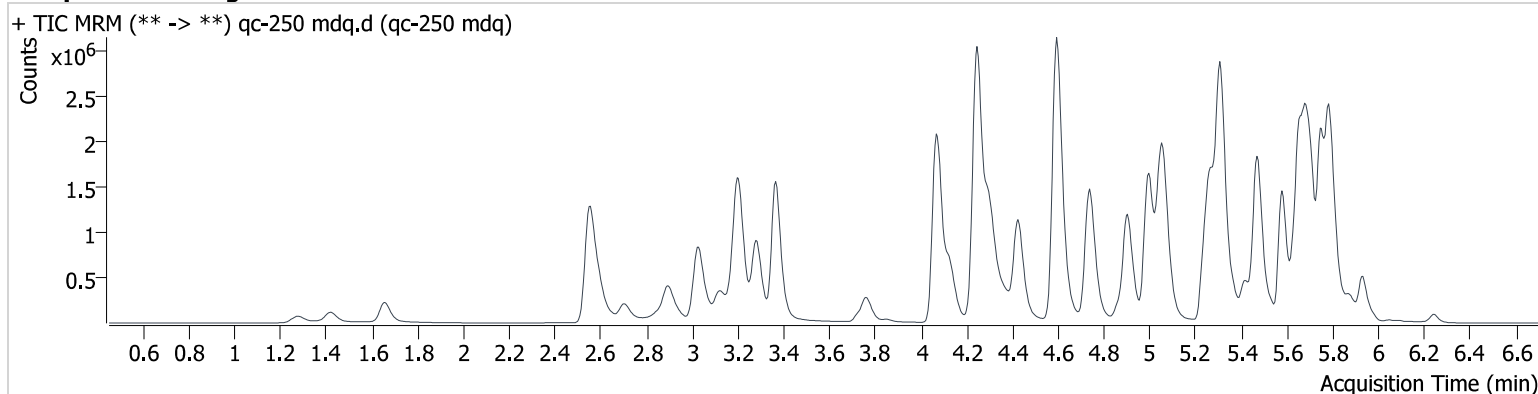
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Calibration Last Update 11/20/2024 1:35:03 PM

Instrument 69679
Type QC
Acq. Method mdqp1 121523.m
Sample Position P2-C2
Injection Volume 3
Acq. Date-Time 11/19/2024 2:10:40 PM
Sample Info.

Data File qc-250 mdq.d
Sample qc-250 mdq
Operator Anne Nord
Comment Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoclonazepam	4.265	238181	205692.9	108.26	83262.6	36618	245.929 ng/ml
Amphetamine	3.026	807821	76744.0	245.58	12498.6	116363	223.571 ng/ml
Bromazepam	5.791	185889	∞	99.92	∞	28571	232.338 ng/ml
Buprenorphine	6.242	155921	8707.3	15.57	2148.4	74860	24.268 ng/ml
Clonazepam	5.589	78799	145368.7	33.10	∞	5477	273.097 ng/ml
Duloxetine	5.648	197692	5866.5	10.77	3614.1	23723	269.602 ng/ml
Hydroxyzine	5.781	1536184	163187.4	126.94	291567.0	502896	254.486 ng/ml
Lamotrigine	4.364	565526	∞	94.18	82501.8	116363	1225.985 ng/ml
Methamphetamine	3.205	2323862	40004155.1	38.31	2515937.6	329470	257.125 ng/ml
Mitragynine	5.415	740934	∞	31.06	31519.7	428375	233.378 ng/ml
Norbuprenorphine	5.015	9881	3256.3	98.23	1734.1	6387	25.332 ng/ml
O-desmethyl-tramadol	3.366	3568927	339165.5	6.55	139587.4	650387	248.817 ng/ml
Sertraline	5.793	321057	∞	100.03	246288.7	53126	234.306 ng/ml
Tramadol	4.246	3083779	64889.5	3.98	5269.1	620650	248.064 ng/ml

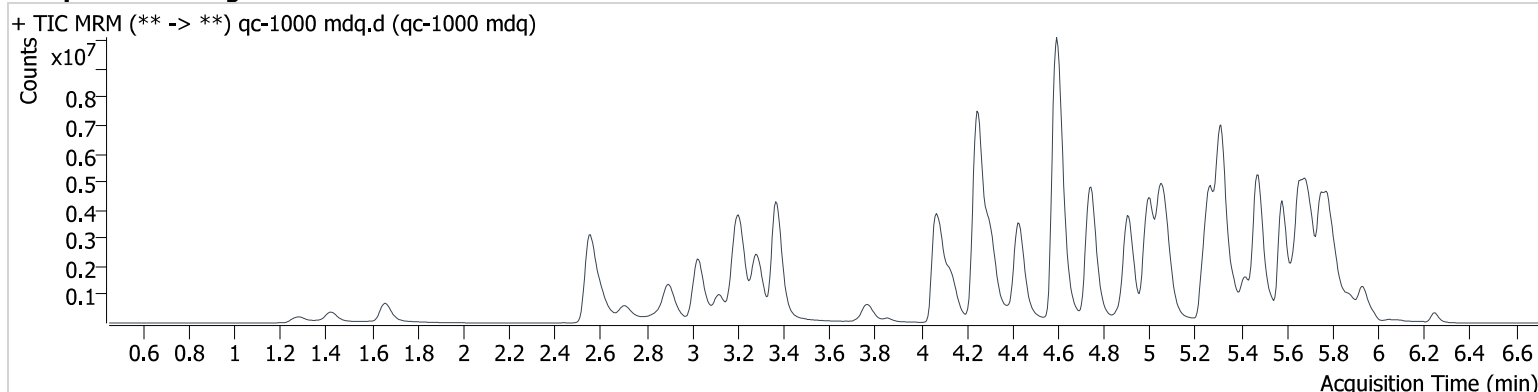
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Calibration Last Update 11/20/2024 1:35:03 PM

Instrument 69679
Type QC
Acq. Method mdqp1 121523.m
Sample Position P2-D2
Injection Volume 3
Acq. Date-Time 11/19/2024 2:19:22 PM
Sample Info.

Data File qc-1000 mdq.d
Sample qc-1000 mdq
Operator Anne Nord
Comment Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoclonazepam	4.270	361786	∞	110.13	35503.7	13327	1023.523 ng/ml
Amphetamine	3.026	2260161	214283.2	244.69	452548.0	113298	643.641 ng/ml
Bromazolam	5.797	336944	657.4	96.67	∞	11079	1083.693 ng/ml
Buprenorphine	6.242	697452	22543.6	15.51	8772.5	86896	93.359 ng/ml
Clonazepam	5.595	194152	431917.5	30.93	125706.7	3862	952.764 ng/ml
Duloxetine	5.648	242438	1504.5	11.71	244.1	8491	922.730 ng/ml
Hydroxyzine	5.781	3394668	584811.7	142.05	315908.8	273592	1032.008 ng/ml
Lamotrigine	4.369	929931	189862.8	90.26	52926.4	113298	2075.095 ng/ml
Methamphetamine	3.205	6902033	658839.2	38.31	∞	352934	718.476 ng/ml
Mitragynine	5.415	2923206	608489.7	32.59	312125.1	322806	1216.057 ng/ml
Norbuprenorphine	5.015	19685	1493.0	96.79	1999.4	2970	108.986 ng/ml
O-desmethyl-tramadol	3.366	12557621	617872.6	6.10	143405.9	580791	980.221 ng/ml
Sertraline	5.809	471201	1381231.9	97.91	∞	18431	988.346 ng/ml
Tramadol	4.251	9348317	∞	3.68	∞	521612	894.564 ng/ml

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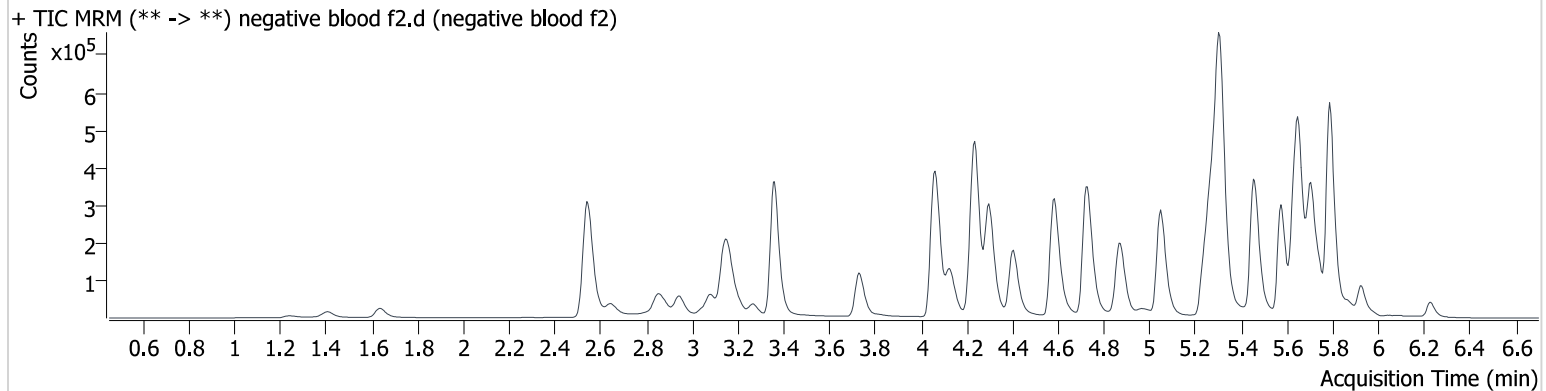
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Calibration Last Update 11/20/2024 1:35:03 PM

Instrument 69679
Type Sample
Acq. Method mdqp1 121523.m
Sample Position P2-F2
Injection Volume 3
Acq. Date-Time 11/19/2024 2:52:31 PM
Sample Info.

Data File negative blood f2.d
Sample negative blood f2
Operator Anne Nord
Comment Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

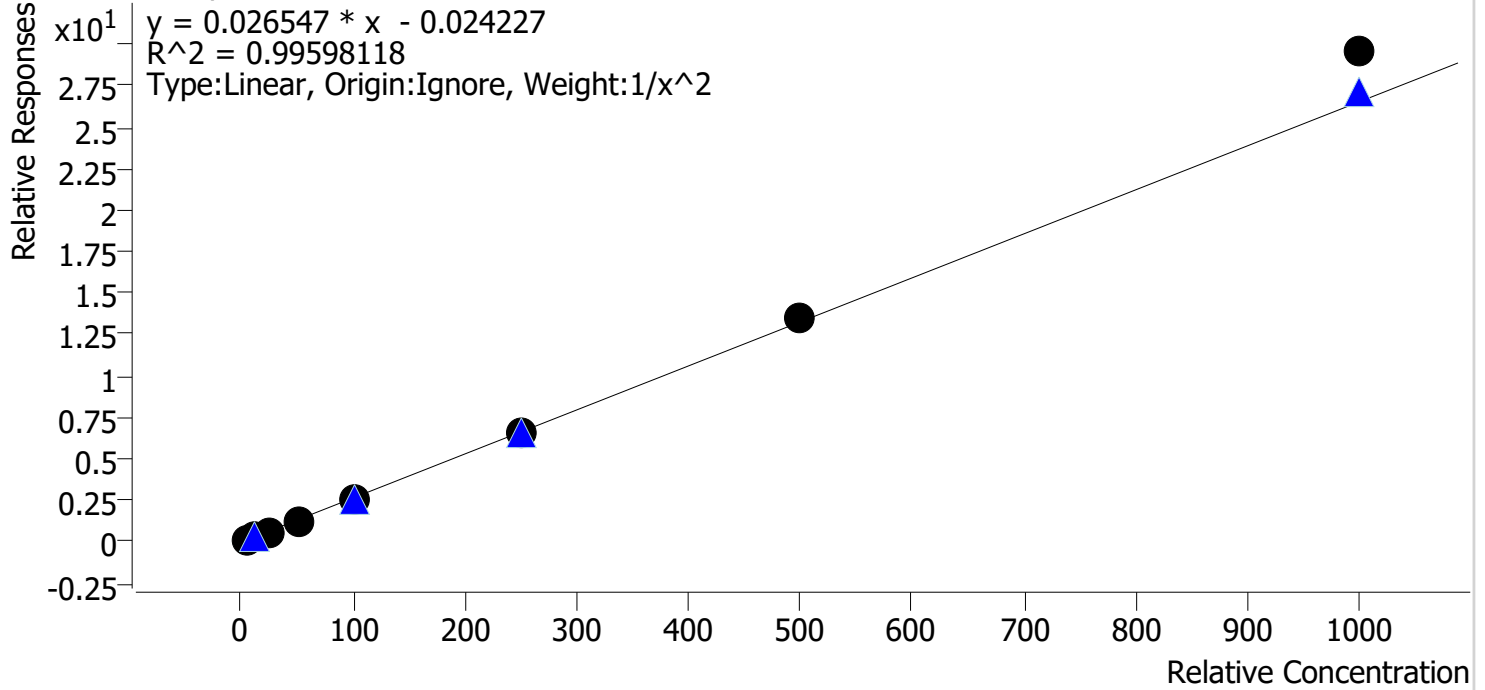
Sample Chromatogram



Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Last Cal. Update 11/20/2024 1:35 PM
Analyst Name ISP\datastor
Analyte 7-aminoclonazepam **Internal Standard** 7-Aminoclonazepam-D4

7-aminoclonazepam - 8 Levels, 8 Levels Used, 8 Points, 8 Points Used, 4 QCs

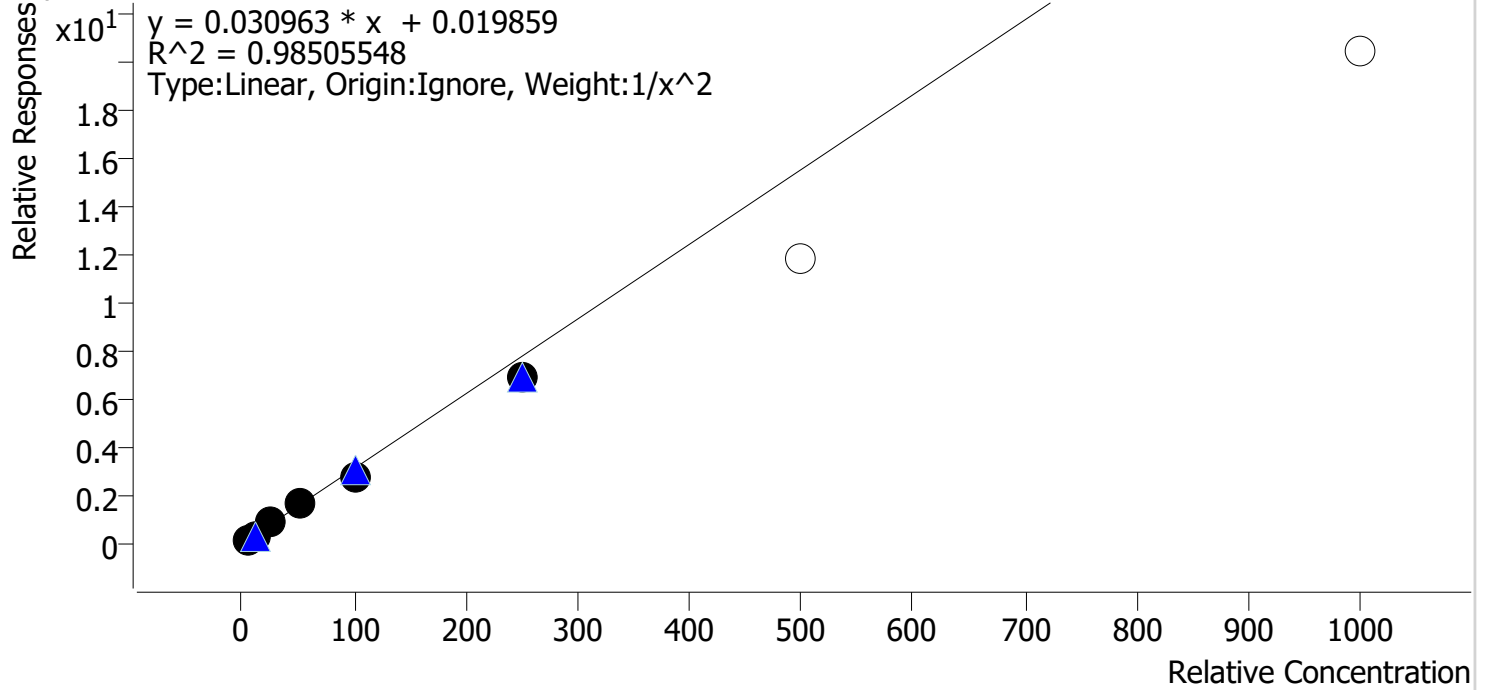


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1 mdq	1	✓	5.0	5.1	101.7
cal 2 mdq	2	✓	10.0	9.9	99.4
cal 3 mdq	3	✓	25.0	24.2	96.7
cal 4 mdq	4	✓	50.0	47.6	95.2
cal 5 mdq	5	✓	100.0	93.5	93.5
cal 6 mdq	6	✓	250.0	252.2	100.9
cal 7 mdq	7	✓	500.0	506.4	101.3
cal 8 mdq	8	✓	1000.0	1114.2	111.4

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Last Cal. Update 11/20/2024 1:35 PM
Analyst Name ISP\datastor
Analyte Amphetamine **Internal Standard** Amphetamine-D11

Amphetamine - 8 Levels, 6 Levels Used, 8 Points, 6 Points Used, 4 QCs

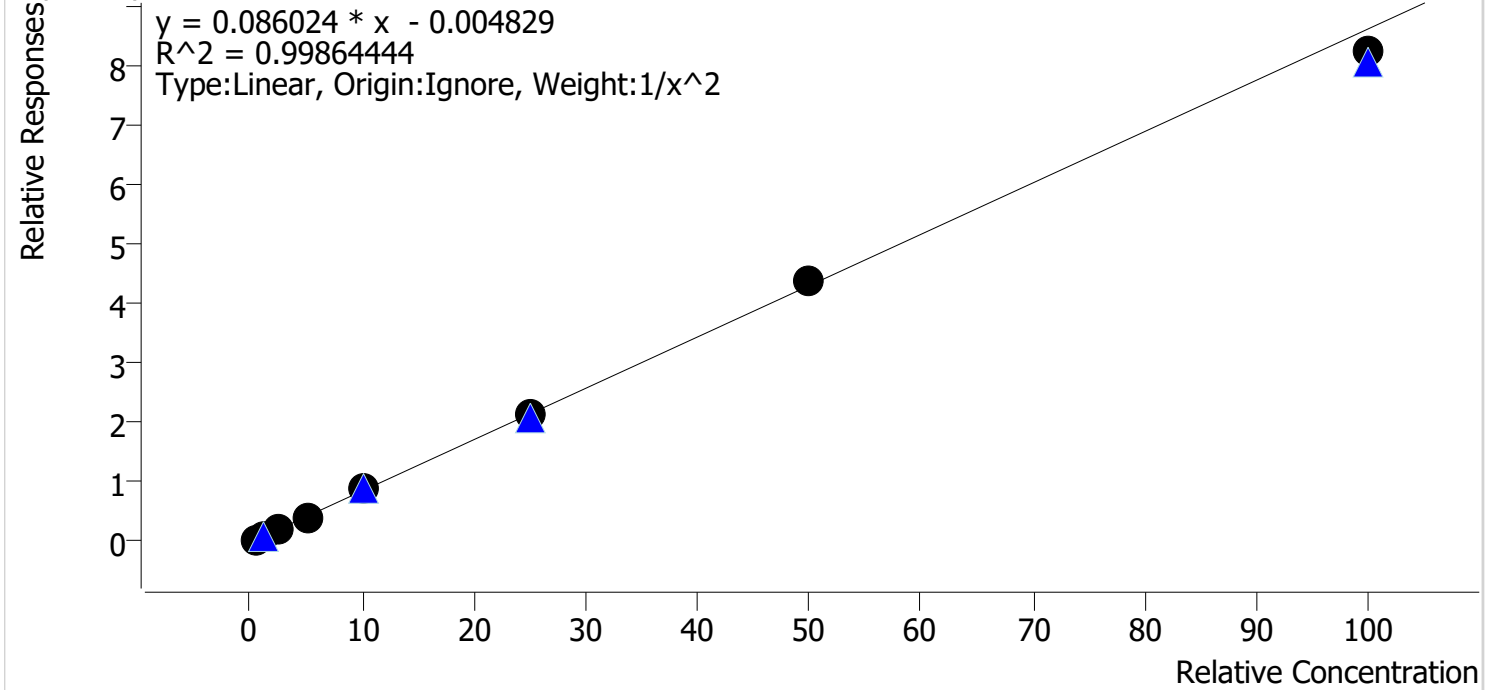


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1 mdq	1	✓	5.0	4.7	94.6
cal 2 mdq	2	✓	10.0	10.6	106.5
cal 3 mdq	3	✓	25.0	27.2	108.6
cal 4 mdq	4	✓	50.0	55.7	111.4
cal 5 mdq	5	✓	100.0	90.6	90.6
cal 6 mdq	6	✓	250.0	220.6	88.3
cal 7 mdq	7	✗	500.0	381.3	76.3
cal 8 mdq	8	✗	1000.0	657.7	65.8

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Last Cal. Update 11/20/2024 1:35 PM
Analyst Name ISP\datastor
Analyte Buprenorphine **Internal Standard** Buprenorphine-D4

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

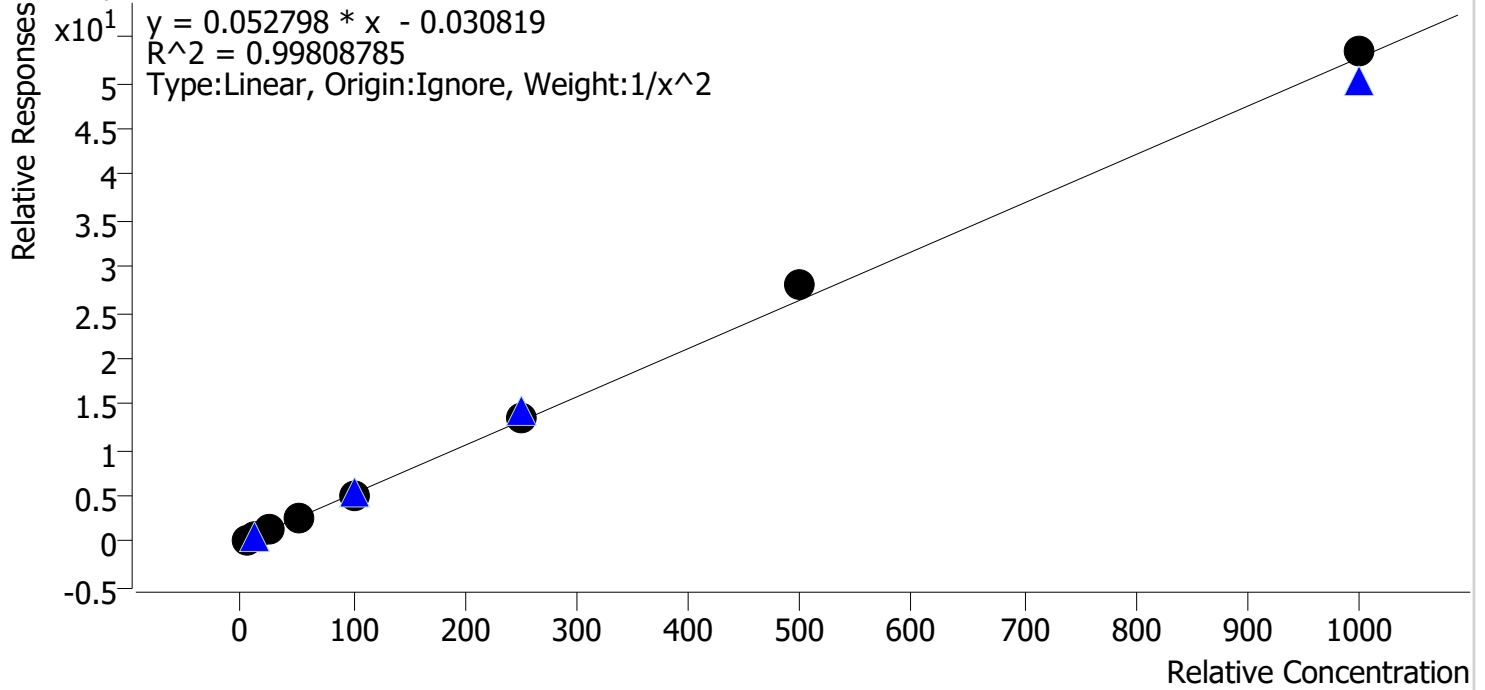


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1 mdq	1	✓	0.5	0.5	101.4
cal 2 mdq	2	✓	1.0	1.0	96.3
cal 3 mdq	3	✓	2.5	2.5	101.3
cal 4 mdq	4	✓	5.0	5.0	99.3
cal 5 mdq	5	✓	10.0	10.5	105.4
cal 6 mdq	6	✓	25.0	24.7	98.9
cal 7 mdq	7	✓	50.0	50.9	101.8
cal 8 mdq	8	✓	100.0	95.6	95.6

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Last Cal. Update 11/20/2024 1:35 PM
Analyst Name ISP\datastor
Analyte Clonazepam **Internal Standard** Clonazepam-D4

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

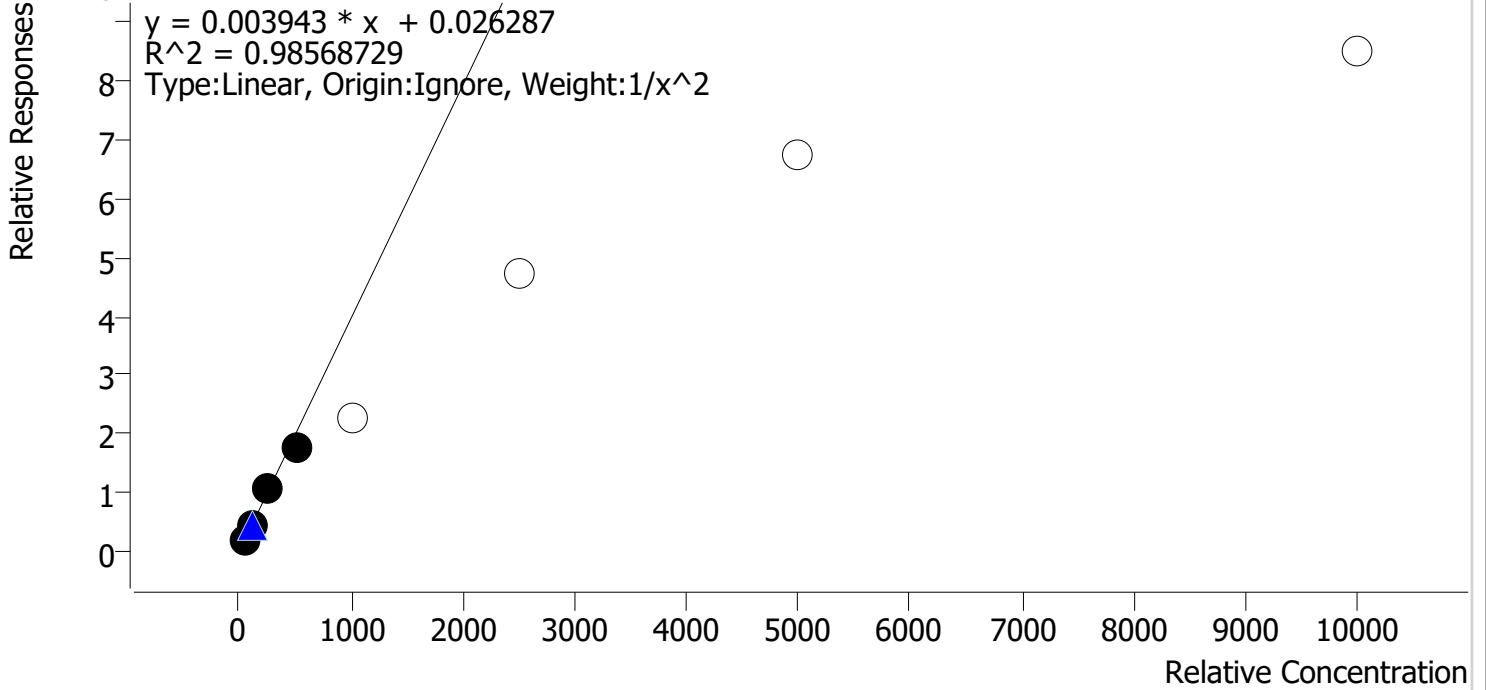


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1 mdq	1	✓	5.0	5.1	102.1
cal 2 mdq	2	✓	10.0	9.9	98.7
cal 3 mdq	3	✓	25.0	23.5	94.1
cal 4 mdq	4	✓	50.0	48.5	97.0
cal 5 mdq	5	✓	100.0	98.0	98.0
cal 6 mdq	6	✓	250.0	256.7	102.7
cal 7 mdq	7	✓	500.0	530.8	106.2
cal 8 mdq	8	✓	1000.0	1012.9	101.3

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
 Last Cal. Update 11/20/2024 1:35 PM
 Analyst Name ISP\datastor
 Analyte Lamotrigine Internal Standard Amphetamine-D11

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

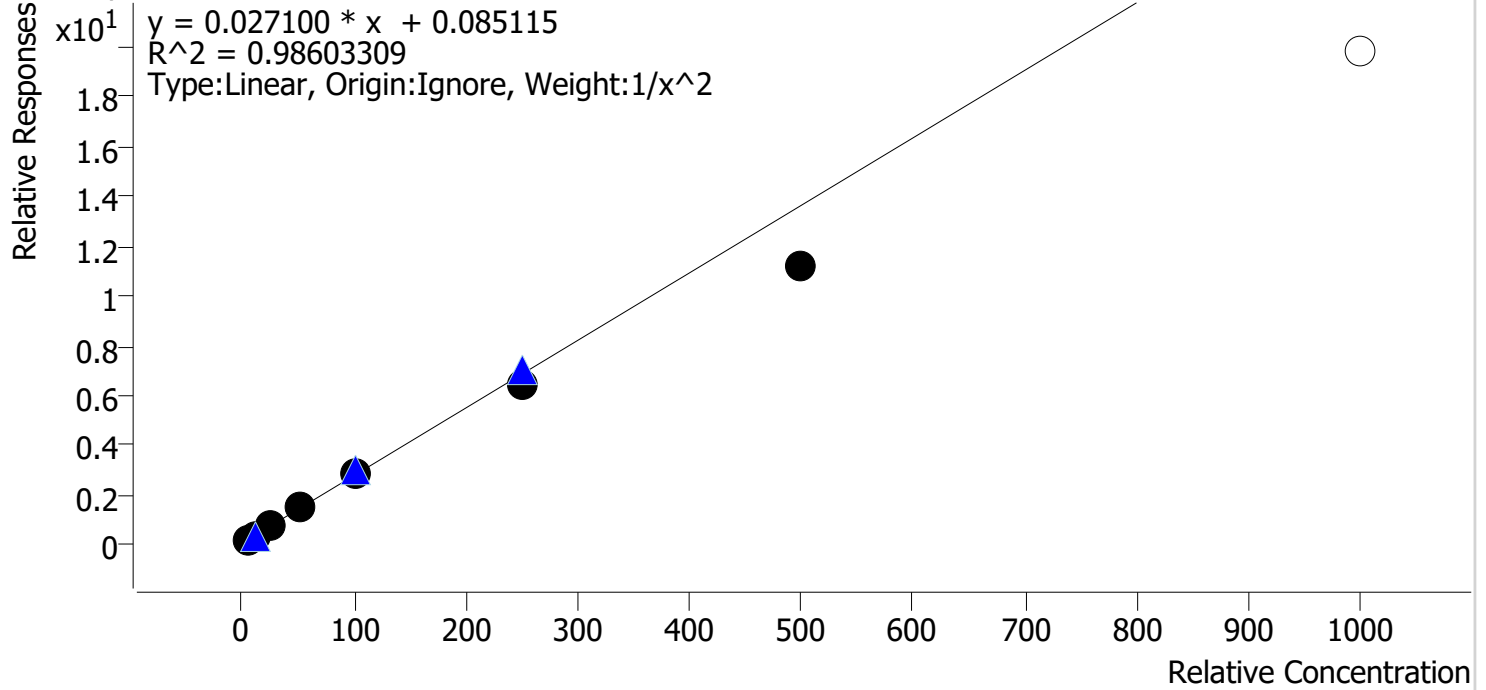


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1 mdq	1	✓	50.0	48.2	96.3
cal 2 mdq	2	✓	100.0	106.4	106.4
cal 3 mdq	3	✓	250.0	269.0	107.6
cal 4 mdq	4	✓	500.0	448.4	89.7
cal 5 mdq	5	✗	1000.0	576.7	57.7
cal 6 mdq	6	✗	2500.0	1184.3	47.4
cal 7 mdq	7	✗	5000.0	1695.5	33.9
cal 8 mdq	8	✗	10000.0	2143.3	21.4

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Last Cal. Update 11/20/2024 1:35 PM
Analyst Name ISP\datastor
Analyte Methamphetamine **Internal Standard** Methamphetamine-D11

Methamphetamine - 8 Levels, 7 Levels Used, 8 Points, 7 Points Used, 4 QCs

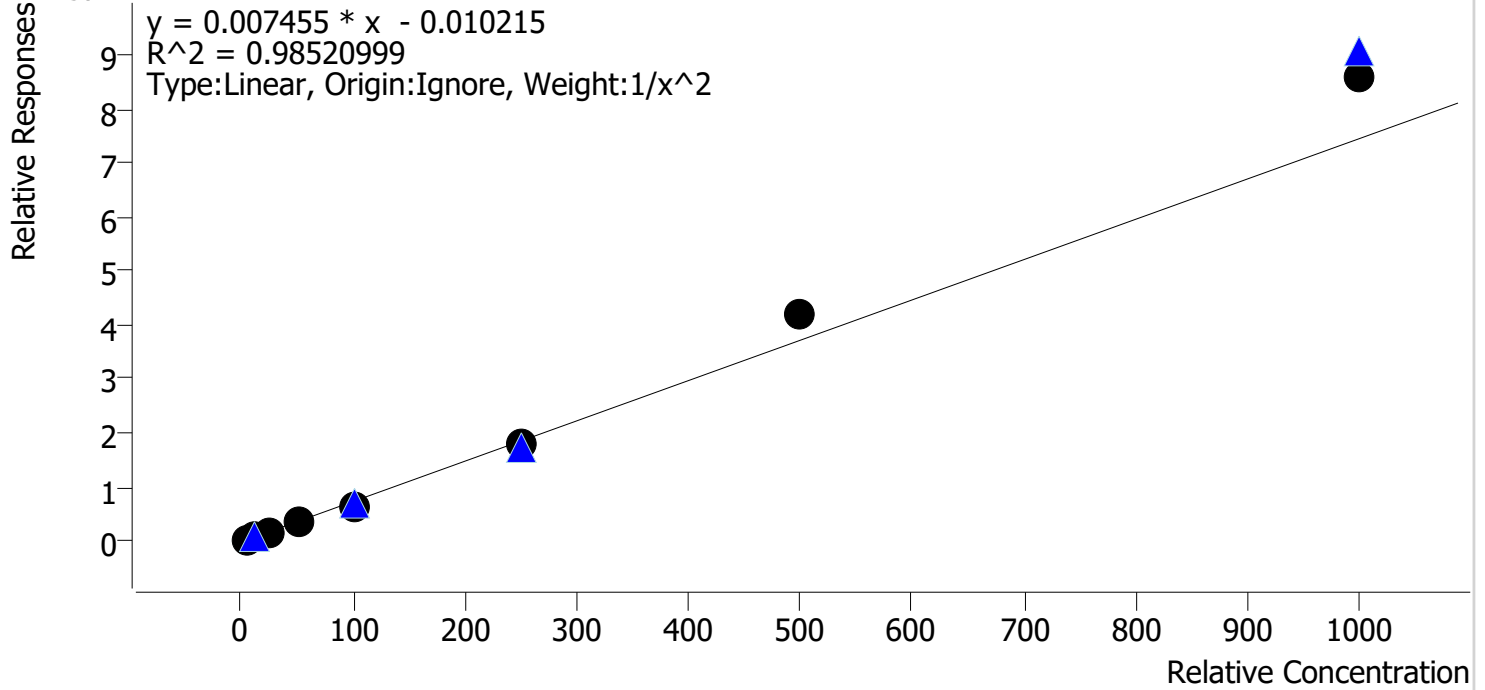


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1 mdq	1	✓	5.0	4.8	95.7
cal 2 mdq	2	✓	10.0	10.2	102.3
cal 3 mdq	3	✓	25.0	27.7	110.8
cal 4 mdq	4	✓	50.0	55.6	111.3
cal 5 mdq	5	✓	100.0	102.8	102.8
cal 6 mdq	6	✓	250.0	236.6	94.6
cal 7 mdq	7	✓	500.0	412.8	82.6
cal 8 mdq	8	✗	1000.0	727.7	72.8

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Last Cal. Update 11/20/2024 1:35 PM
Analyst Name ISP\datastor
Analyte Mitragynine **Internal Standard** Methadone-D9

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

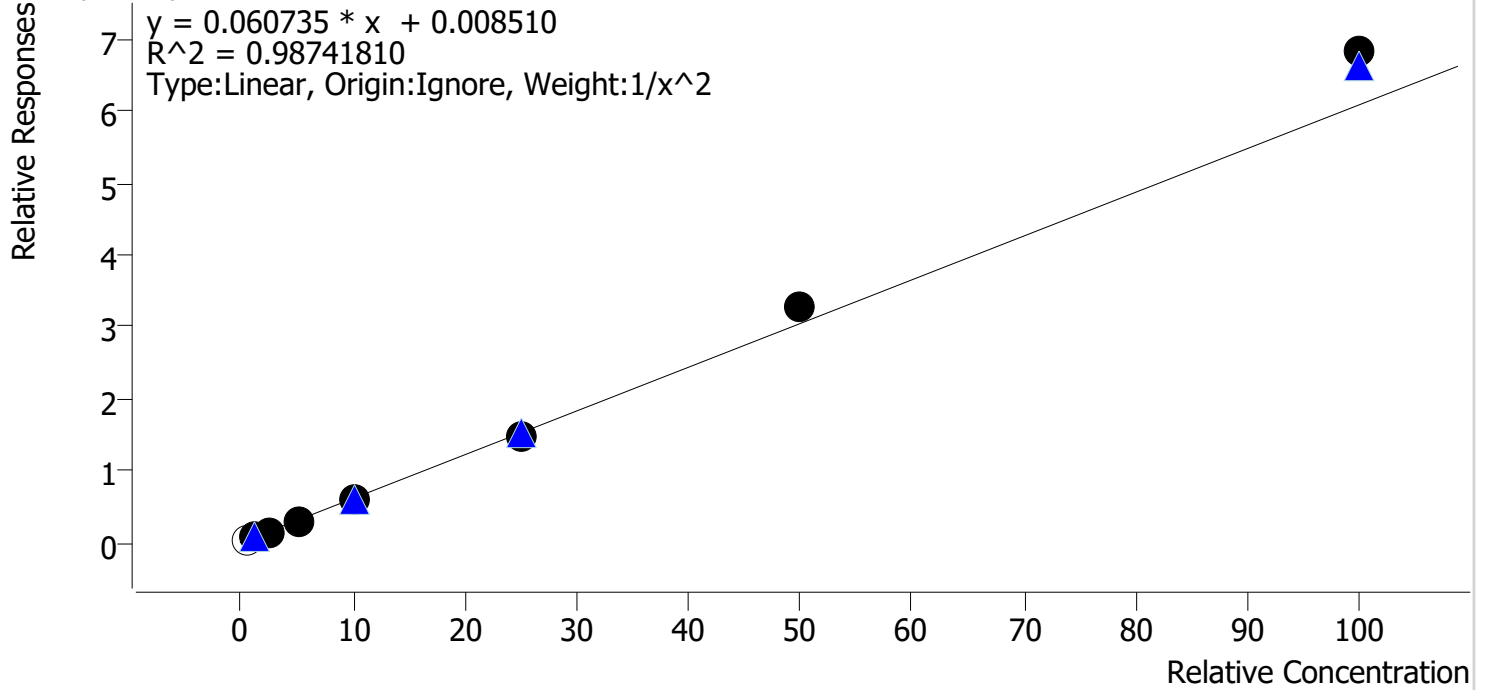


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1 mdq	1	✓	5.0	5.2	103.0
cal 2 mdq	2	✓	10.0	10.1	100.7
cal 3 mdq	3	✓	25.0	22.0	87.8
cal 4 mdq	4	✓	50.0	47.7	95.4
cal 5 mdq	5	✓	100.0	86.9	86.9
cal 6 mdq	6	✓	250.0	242.1	96.8
cal 7 mdq	7	✓	500.0	568.3	113.7
cal 8 mdq	8	✓	1000.0	1156.3	115.6

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Last Cal. Update 11/20/2024 1:35 PM
Analyst Name ISP\datastor
Analyte Norbuprenorphine **Internal Standard** Norbuprenorphine-D3

Norbuprenorphine - 8 Levels, 7 Levels Used, 8 Points, 7 Points Used, 4 QCs

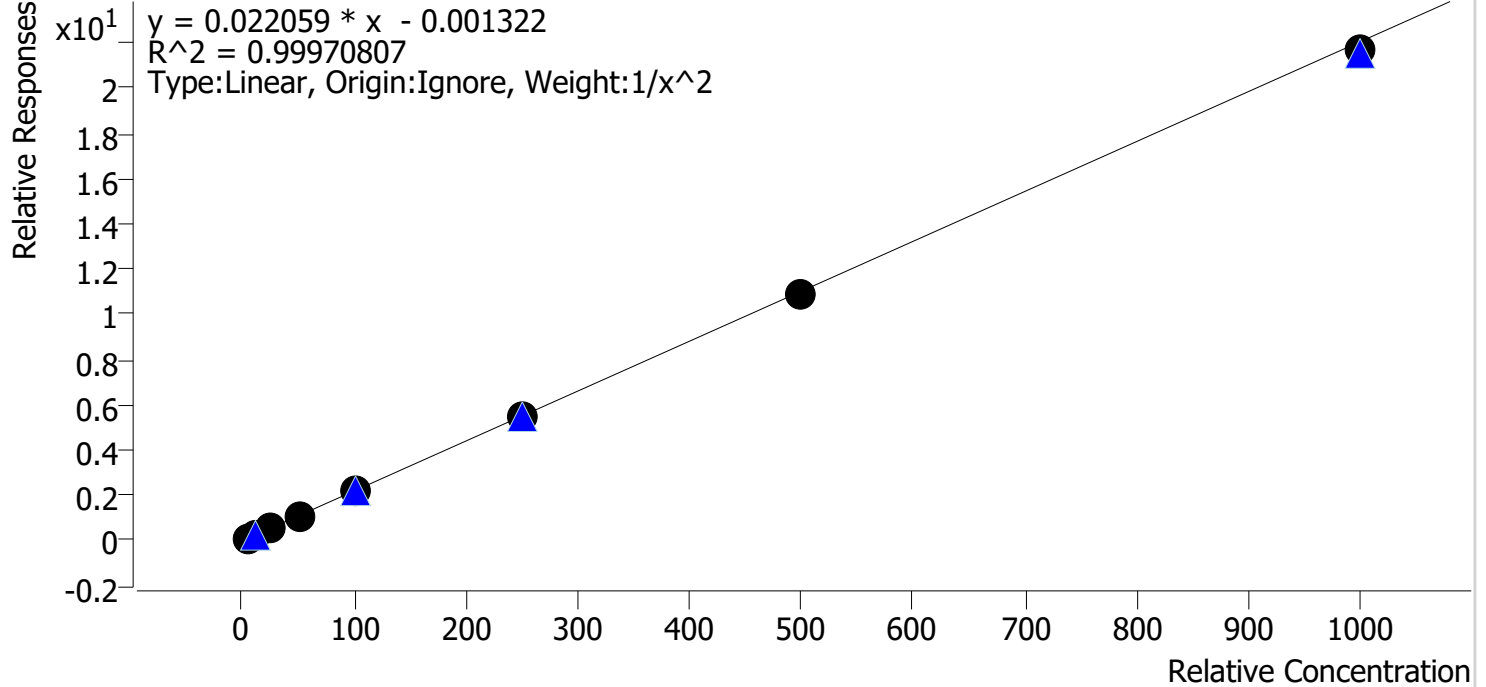


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1 mdq	1	x	0.5	0.6	111.6
cal 2 mdq	2	✓	1.0	1.1	107.6
cal 3 mdq	3	✓	2.5	2.1	85.3
cal 4 mdq	4	✓	5.0	4.6	92.3
cal 5 mdq	5	✓	10.0	9.7	96.9
cal 6 mdq	6	✓	25.0	24.4	97.7
cal 7 mdq	7	✓	50.0	54.1	108.1
cal 8 mdq	8	✓	100.0	112.2	112.2

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Last Cal. Update 11/20/2024 1:35 PM
Analyst Name ISP\datastor
Analyte O-desmethyl-tramadol **Internal Standard** O-desmethyl-tramadol-D6

O-desmethyl-tramadol - 8 Levels, 8 Levels Used, 8 Points, 8 Points Used, 4 QCs

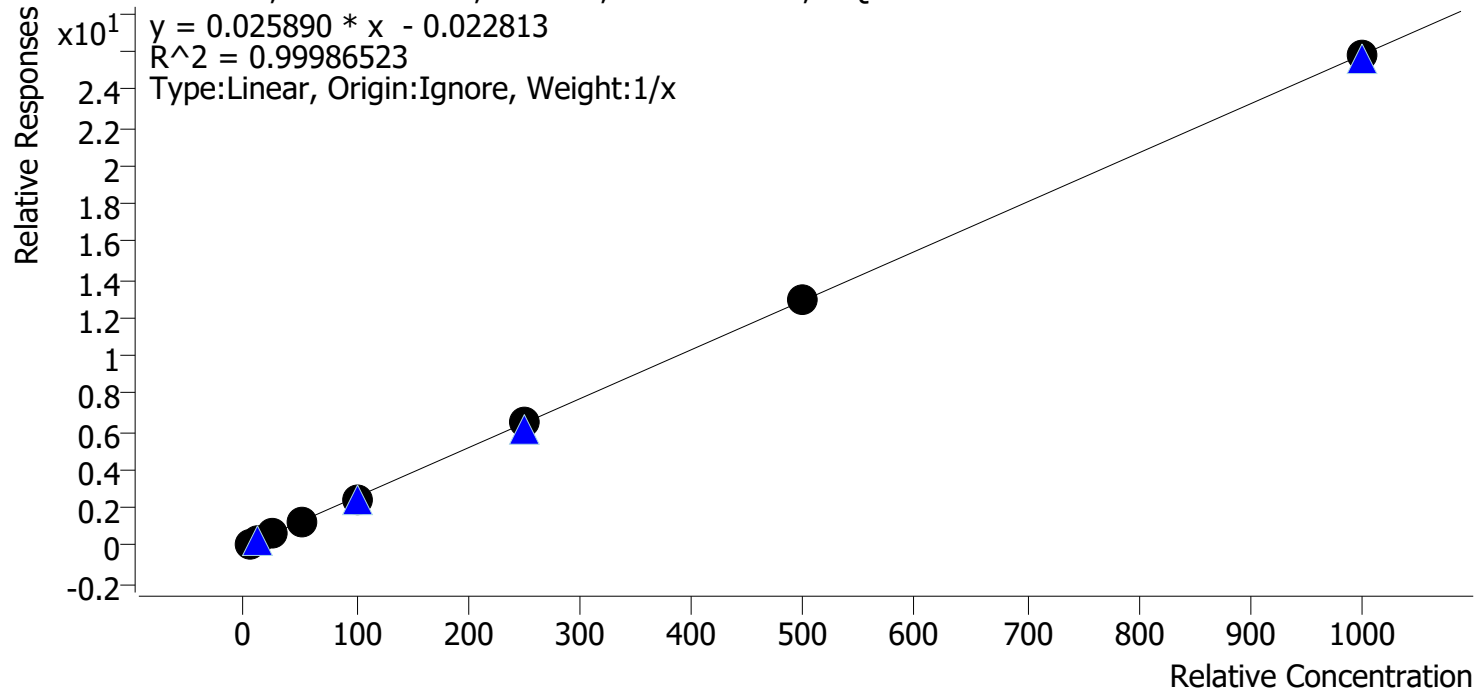


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1 mdq	1	✓	5.0	4.9	98.6
cal 2 mdq	2	✓	10.0	10.2	102.4
cal 3 mdq	3	✓	25.0	25.2	100.6
cal 4 mdq	4	✓	50.0	50.6	101.2
cal 5 mdq	5	✓	100.0	99.5	99.5
cal 6 mdq	6	✓	250.0	252.2	100.9
cal 7 mdq	7	✓	500.0	493.2	98.6
cal 8 mdq	8	✓	1000.0	982.8	98.3

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Last Cal. Update 11/20/2024 1:35 PM
Analyst Name ISP\datastor
Analyte Sertraline **Internal Standard** Sertraline-D3

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

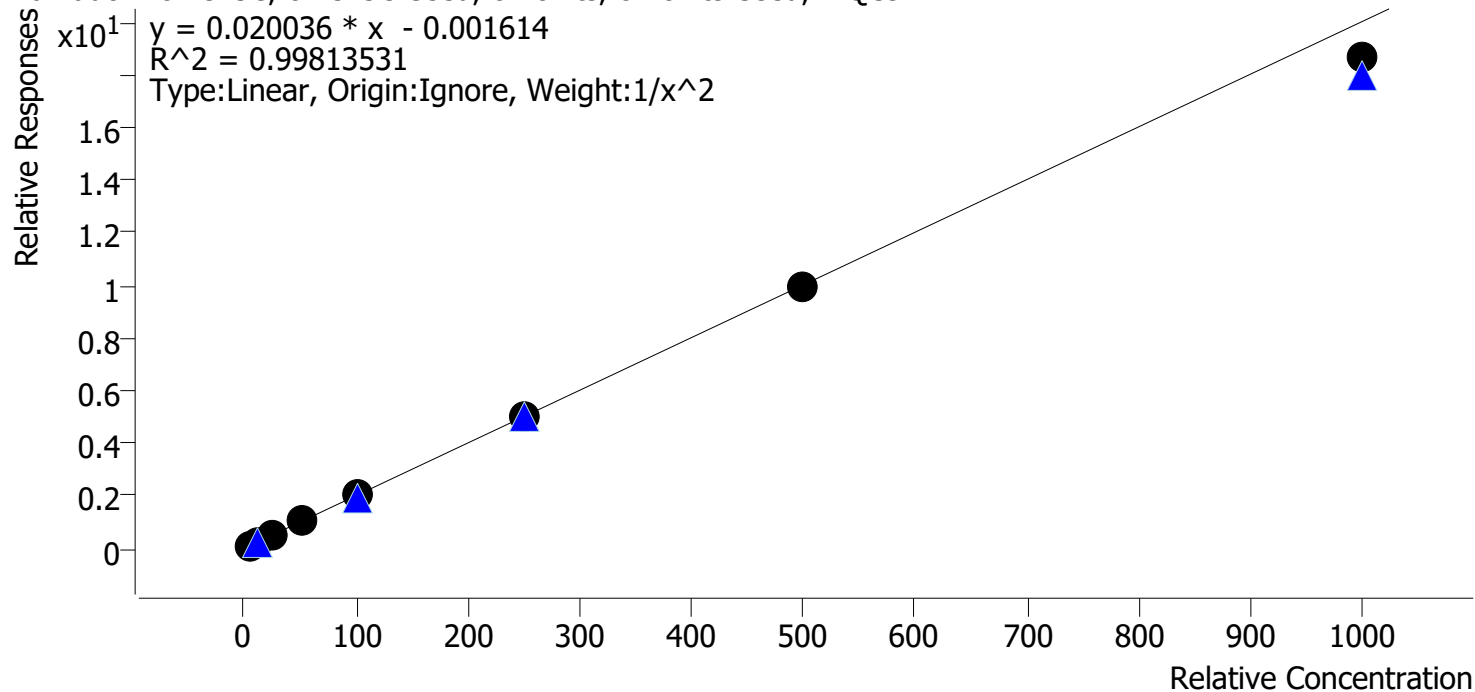


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1 mdq	1	✓	5.0	5.2	103.2
cal 2 mdq	2	✓	10.0	10.0	99.5
cal 3 mdq	3	✓	25.0	25.0	99.8
cal 4 mdq	4	✓	50.0	49.9	99.8
cal 5 mdq	5	✓	100.0	95.9	95.9
cal 6 mdq	6	✓	250.0	253.6	101.4
cal 7 mdq	7	✓	500.0	502.4	100.5
cal 8 mdq	8	✓	1000.0	998.2	99.8

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Last Cal. Update 11/20/2024 1:35 PM
Analyst Name ISP\datastor
Analyte Tramadol **Internal Standard** Tramadol-13C-D3

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

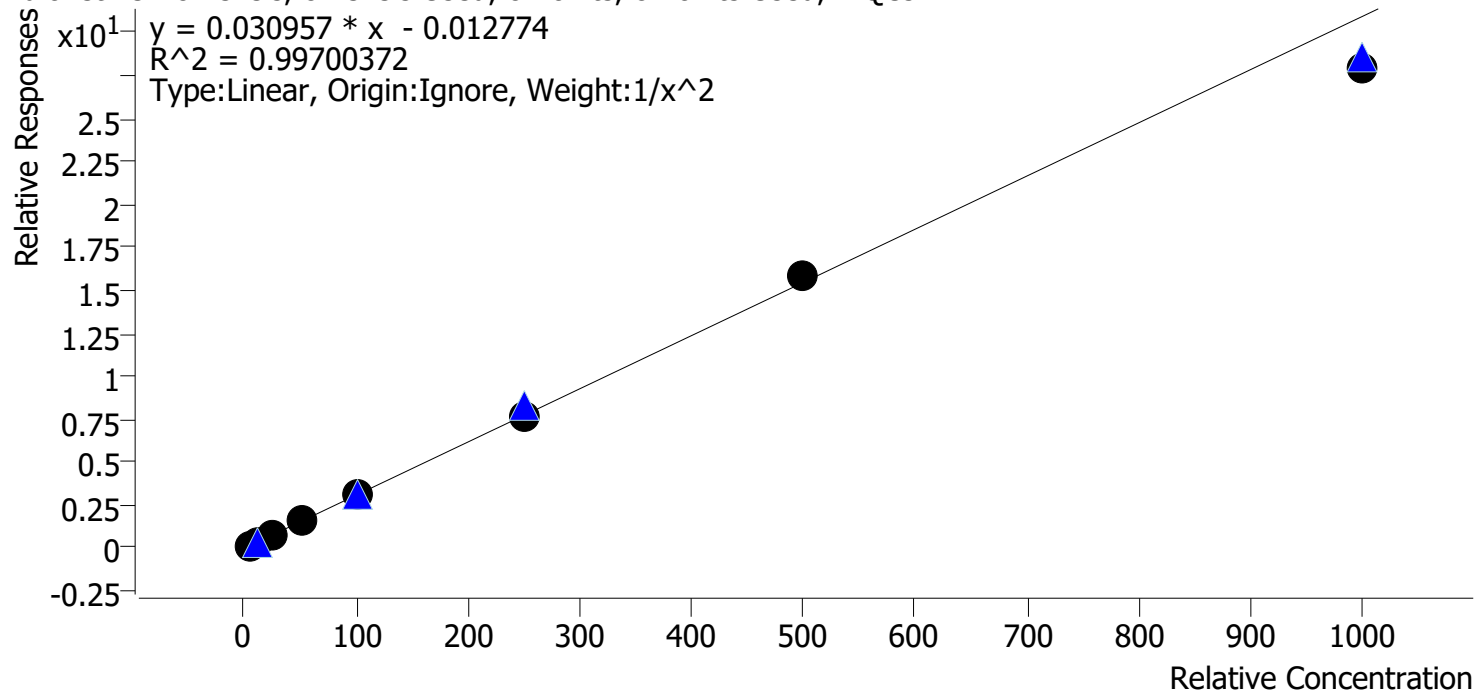


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1 mdq	1	✓	5.0	4.8	96.7
cal 2 mdq	2	✓	10.0	10.6	105.9
cal 3 mdq	3	✓	25.0	25.1	100.5
cal 4 mdq	4	✓	50.0	50.9	101.8
cal 5 mdq	5	✓	100.0	100.6	100.6
cal 6 mdq	6	✓	250.0	253.3	101.3
cal 7 mdq	7	✓	500.0	499.5	99.9
cal 8 mdq	8	✓	1000.0	931.5	93.2

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Last Cal. Update 11/20/2024 1:35 PM
Analyst Name ISP\datastor
Analyte Duloxetine **Internal Standard** Duloxetine-d3

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

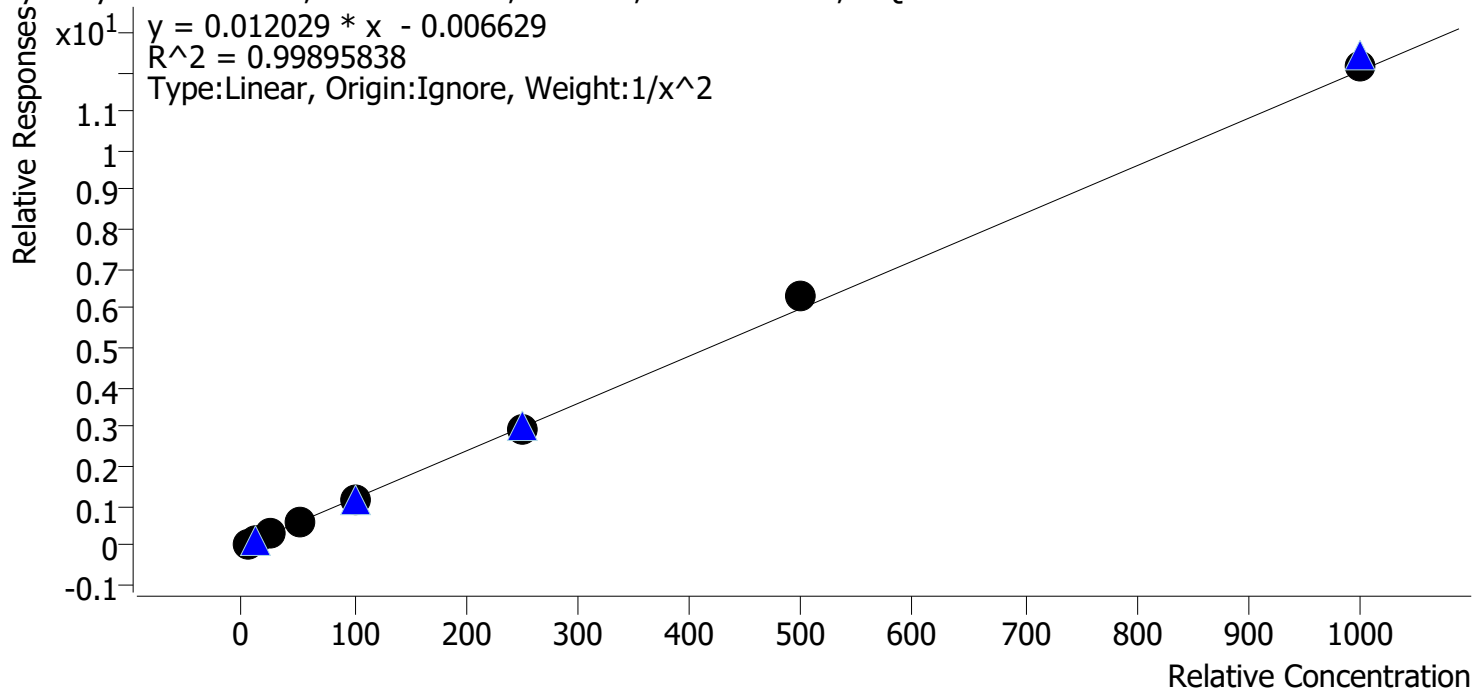


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1 mdq	1	✓	5.0	5.0	99.7
cal 2 mdq	2	✓	10.0	9.8	98.0
cal 3 mdq	3	✓	25.0	25.8	103.4
cal 4 mdq	4	✓	50.0	52.9	105.7
cal 5 mdq	5	✓	100.0	101.7	101.7
cal 6 mdq	6	✓	250.0	247.4	99.0
cal 7 mdq	7	✓	500.0	512.7	102.5
cal 8 mdq	8	✓	1000.0	900.1	90.0

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Last Cal. Update 11/20/2024 1:35 PM
Analyst Name ISP\datastor
Analyte Hydroxyzine **Internal Standard** Hydroxyzine 13D6

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

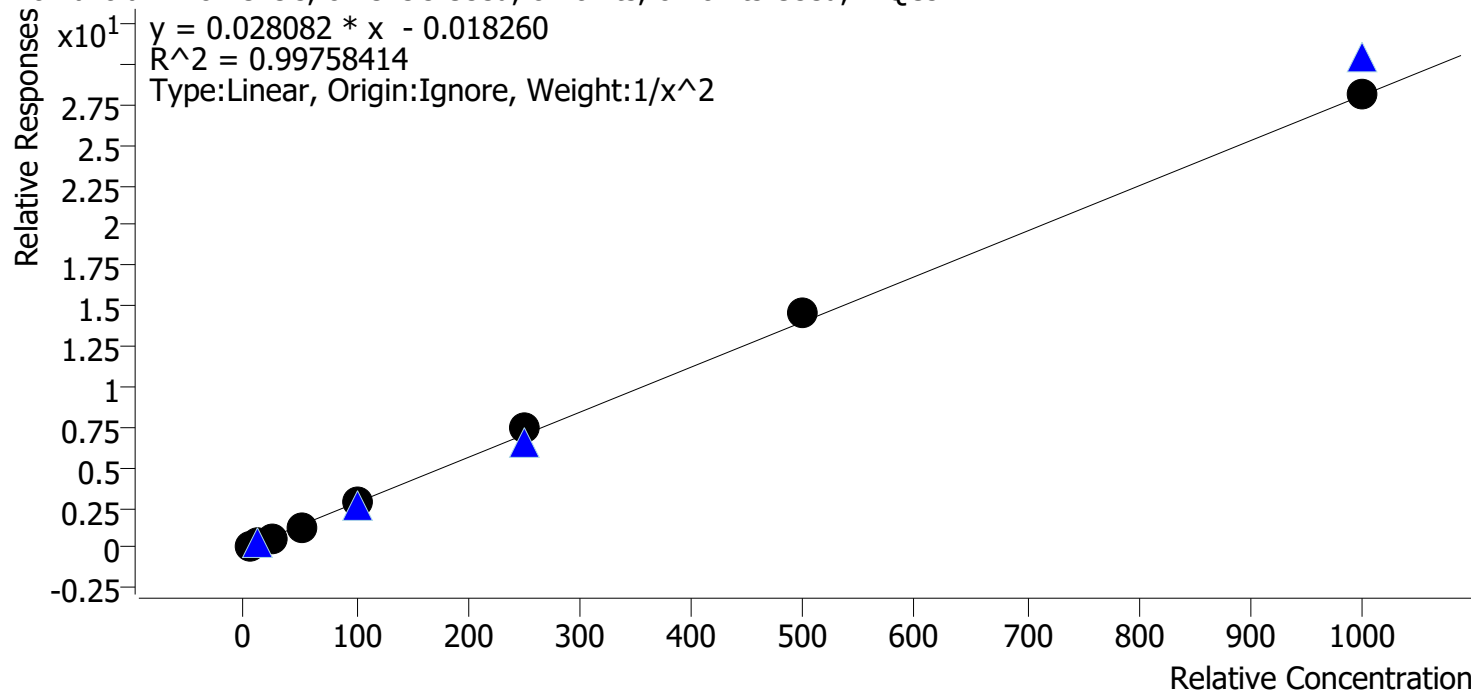


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1 mdq	1	✓	5.0	5.0	101.0
cal 2 mdq	2	✓	10.0	9.9	99.2
cal 3 mdq	3	✓	25.0	24.9	99.5
cal 4 mdq	4	✓	50.0	47.2	94.5
cal 5 mdq	5	✓	100.0	100.5	100.5
cal 6 mdq	6	✓	250.0	248.6	99.4
cal 7 mdq	7	✓	500.0	522.5	104.5
cal 8 mdq	8	✓	1000.0	1013.5	101.4

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Last Cal. Update 11/20/2024 1:35 PM
Analyst Name ISP\datastor
Analyte Bromazepam **Internal Standard** Bromazepam-D5

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



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1 mdq	1	✓	5.0	5.1	101.5
cal 2 mdq	2	✓	10.0	10.1	100.6
cal 3 mdq	3	✓	25.0	23.2	92.8
cal 4 mdq	4	✓	50.0	47.6	95.1
cal 5 mdq	5	✓	100.0	99.9	99.9
cal 6 mdq	6	✓	250.0	265.0	106.0
cal 7 mdq	7	✓	500.0	518.1	103.6
cal 8 mdq	8	✓	1000.0	1004.7	100.5

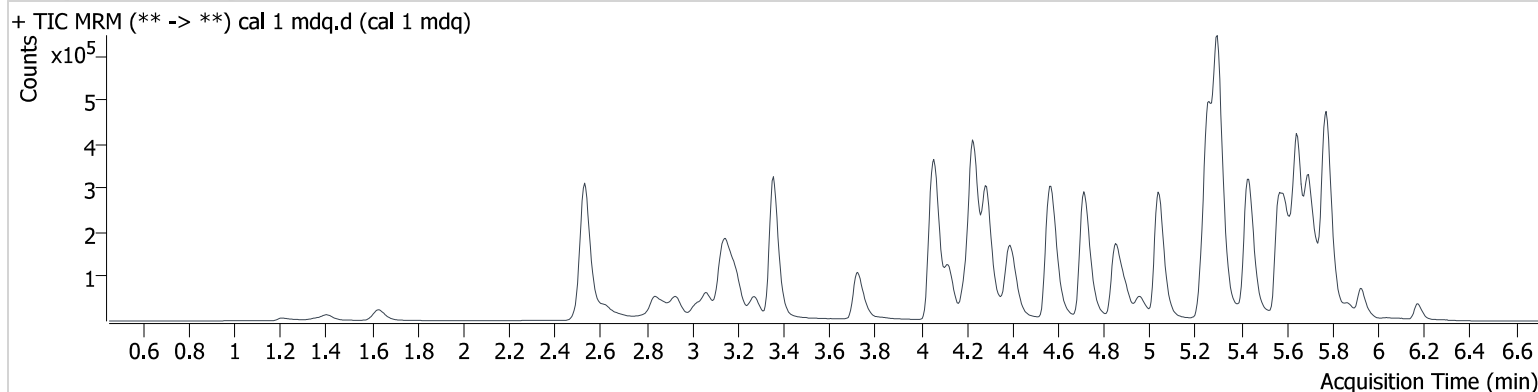
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Calibration Last Update 11/20/2024 1:35:03 PM

Instrument 69679
Type Cal
Acq. Method mdqp1 121523.m
Sample Position P2-A1
Injection Volume 3
Acq. Date-Time 11/19/2024 12:08:37 PM
Sample Info.

Data File cal 1 mdq.d
Sample cal 1 mdq
Operator Anne Nord
Comment Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
7-aminoclonazepam	4.270	9144	24902.8	111.41	58698.6	82591	5.083	ng/ml
Amphetamine	3.021	26652	770.9	248.63	27301.0	160265	4.730	ng/ml
Bromazolam	5.791	6851	132.4	110.70	345.2	55166	5.073	ng/ml
Buprenorphine	6.191	3263	398.3	14.50	69.8	84114	0.507	ng/ml
Clonazepam	5.589	1894	∞	33.23	1853.1	7930	5.106	ng/ml
Duloxetine	5.643	7205	124.8	10.15	480.6	50884	4.987	ng/ml
Hydroxyzine	5.765	43841	3812.8	126.40	11964.6	810339	5.049	ng/ml
Lamotrigine	4.359	34643	∞	91.05	∞	160265	48.157	ng/ml
Methamphetamine	3.200	97449	2504.3	35.37	∞	453596	4.787	ng/ml
Mitragynine	5.394	16427	6500.7	32.77	2776.3	582661	5.152	ng/ml
Norbuprenorphine	5.000	470	75.4	90.02	55.7	11073	0.558	ng/ml
O-desmethyl-tramadol	3.361	88636	5685.9	6.75	1081.3	825144	4.930	ng/ml
Sertraline	5.783	14456	∞	107.52	49550.6	130483	5.160	ng/ml
Tramadol	4.241	83384	5410.7	4.57	222.3	875003	4.837	ng/ml

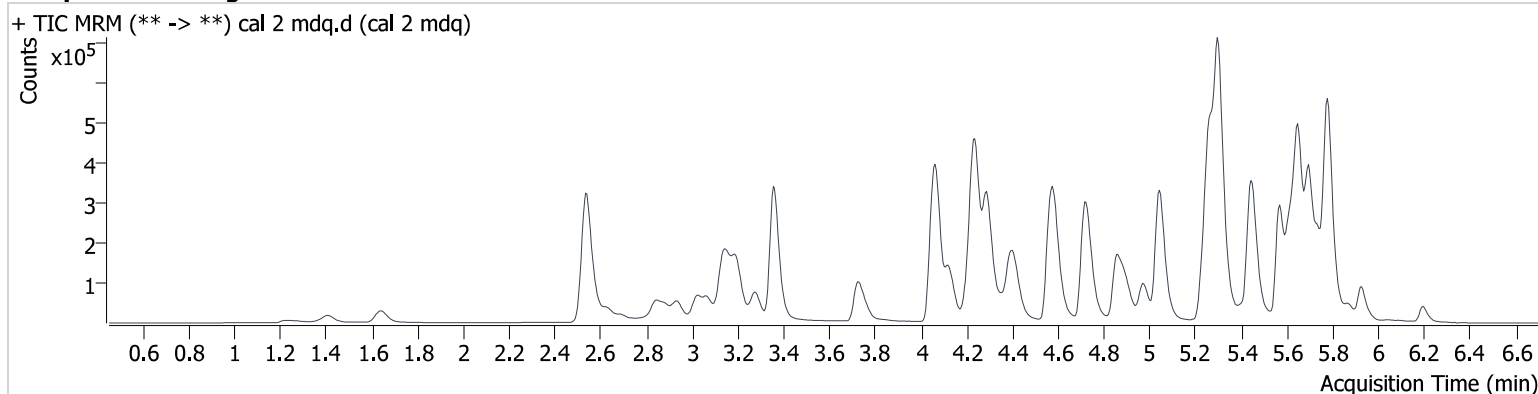
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Calibration Last Update 11/20/2024 1:35:03 PM

Instrument 69679
Type Cal
Acq. Method mdqp1 121523.m
Sample Position P2-B1
Injection Volume 3
Acq. Date-Time 11/19/2024 12:17:29 PM
Sample Info.

Data File cal 2 mdq.d
Sample cal 2 mdq
Operator Anne Nord
Comment Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
7-aminoclonazepam	4.270	18897	48584.4	106.07	∞	78822	9.943	ng/ml
Amphetamine	3.021	50923	3537.3	248.37	7410.2	145668	10.649	ng/ml
Bromazolam	5.791	14458	2141.5	101.31	1041.4	54688	10.065	ng/ml
Buprenorphine	6.212	6549	395.6	17.18	158.0	83962	0.963	ng/ml
Clonazepam	5.589	4074	25217.2	34.63	∞	8313	9.866	ng/ml
Duloxetine	5.643	14935	510.0	11.31	915.2	51412	9.796	ng/ml
Hydroxyzine	5.770	87251	20725.1	134.50	336.3	773967	9.922	ng/ml
Lamotrigine	4.359	64931	∞	94.27	∞	145668	106.388	ng/ml
Methamphetamine	3.200	155493	6822.8	38.63	2451.6	429251	10.226	ng/ml
Mitragynine	5.404	36792	18939.0	30.67	1951.9	567102	10.073	ng/ml
Norbuprenorphine	5.005	743	107.5	106.17	251.1	10068	1.076	ng/ml
O-desmethyl-tramadol	3.366	174533	29803.1	6.85	1163.2	777132	10.241	ng/ml
Sertraline	5.783	29586	∞	100.76	49060.8	125982	9.952	ng/ml
Tramadol	4.246	169034	8619.8	4.01	1116.4	802524	10.593	ng/ml

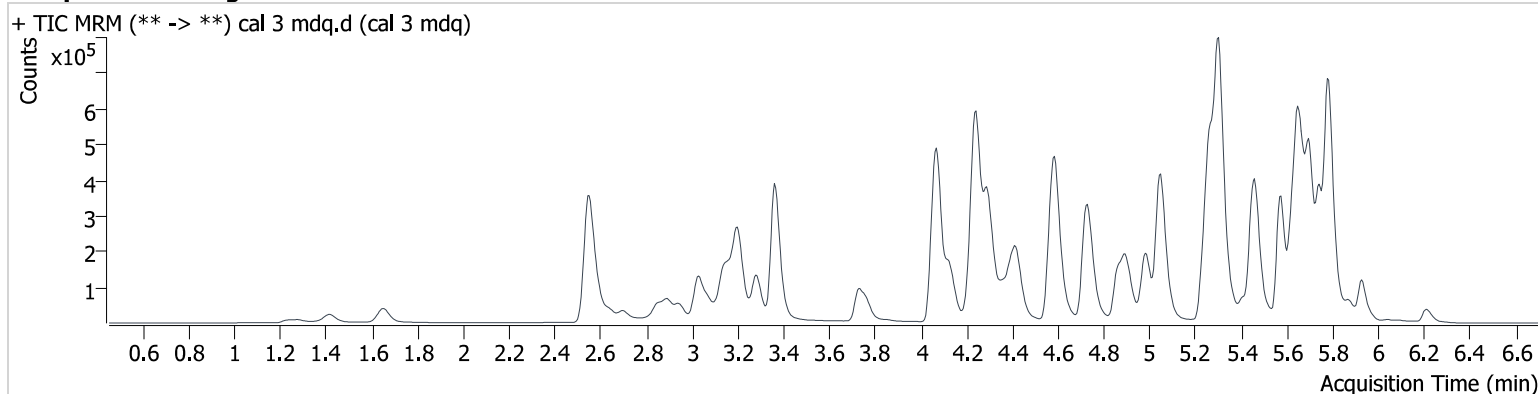
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Calibration Last Update 11/20/2024 1:35:03 PM

Instrument 69679
Type Cal
Acq. Method mdqp1 121523.m
Sample Position P2-C1
Injection Volume 3
Acq. Date-Time 11/19/2024 12:26:11 PM
Sample Info.

Data File cal 3 mdq.d
Sample cal 3 mdq
Operator Anne Nord
Comment Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
7-aminoclonazepam	4.270	40801	∞	110.81	707810.9	66058	24.179	ng/ml
Amphetamine	3.026	103507	7163.5	257.44	∞	120260	27.156	ng/ml
Bromazolam	5.791	31601	825.0	107.20	1119.6	49920	23.193	ng/ml
Buprenorphine	6.227	16261	10054.7	15.93	195.2	76311	2.533	ng/ml
Clonazepam	5.589	10060	∞	31.84	6454.4	8305	23.527	ng/ml
Duloxetine	5.648	33613	596.0	10.64	2537.7	42693	25.845	ng/ml
Hydroxyzine	5.775	194280	38269.9	131.35	22823.9	663885	24.878	ng/ml
Lamotrigine	4.364	130729	∞	91.90	953312.3	120260	269.043	ng/ml
Methamphetamine	3.205	306661	21536.7	37.10	5541.9	367041	27.689	ng/ml
Mitragynine	5.410	80530	43365.2	28.89	11821.1	524822	21.952	ng/ml
Norbuprenorphine	5.010	1248	488.3	93.85	85.7	9042	2.132	ng/ml
O-desmethyl-tramadol	3.366	384363	22090.3	6.75	2938.8	694453	25.150	ng/ml
Sertraline	5.783	66166	∞	97.93	1715458.6	106135	24.961	ng/ml
Tramadol	4.246	357593	6644.1	4.14	804.6	712935	25.114	ng/ml

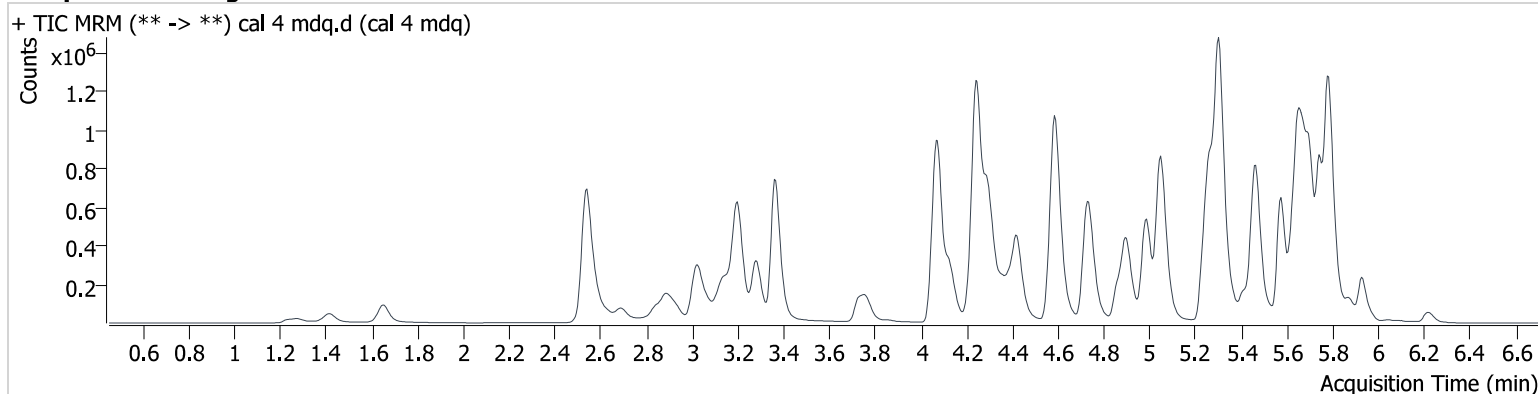
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Calibration Last Update 11/20/2024 1:35:03 PM

Instrument 69679
Type Cal
Acq. Method mdqp1 121523.m
Sample Position P2-D1
Injection Volume 3
Acq. Date-Time 11/19/2024 12:34:53 PM
Sample Info.

Data File cal 4 mdq.d
Sample cal 4 mdq
Operator Anne Nord
Comment Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoclonazepam	4.270	103777	290851.7	108.83	∞	83768	47.580 ng/ml
Amphetamine	3.021	289471	33429.7	247.38	1055276.0	165873	55.721 ng/ml
Bromazolam	5.791	77977	6185.7	103.30	∞	59194	47.561 ng/ml
Buprenorphine	6.232	44007	7376.9	15.88	836.7	104260	4.963 ng/ml
Clonazepam	5.589	24998	28766.1	32.98	12259.7	9880	48.503 ng/ml
Duloxetine	5.648	81574	666.7	10.73	2858.0	50248	52.853 ng/ml
Hydroxyzine	5.775	493682	75389.2	137.42	85054.1	879020	47.239 ng/ml
Lamotrigine	4.364	297610	∞	92.62	414871.2	165873	448.399 ng/ml
Methamphetamine	3.205	777991	∞	38.12	21691.6	488343	55.645 ng/ml
Mitragynine	5.410	237080	54243.9	28.50	43642.0	686498	47.694 ng/ml
Norbuprenorphine	5.010	3411	608.3	100.81	313.1	11814	4.614 ng/ml
O-desmethyl-tramadol	3.366	1084221	154225.9	6.73	13026.3	972803	50.585 ng/ml
Sertraline	5.788	157261	∞	96.34	228851.0	123912	49.902 ng/ml
Tramadol	4.246	990051	∞	4.09	∞	971879	50.924 ng/ml

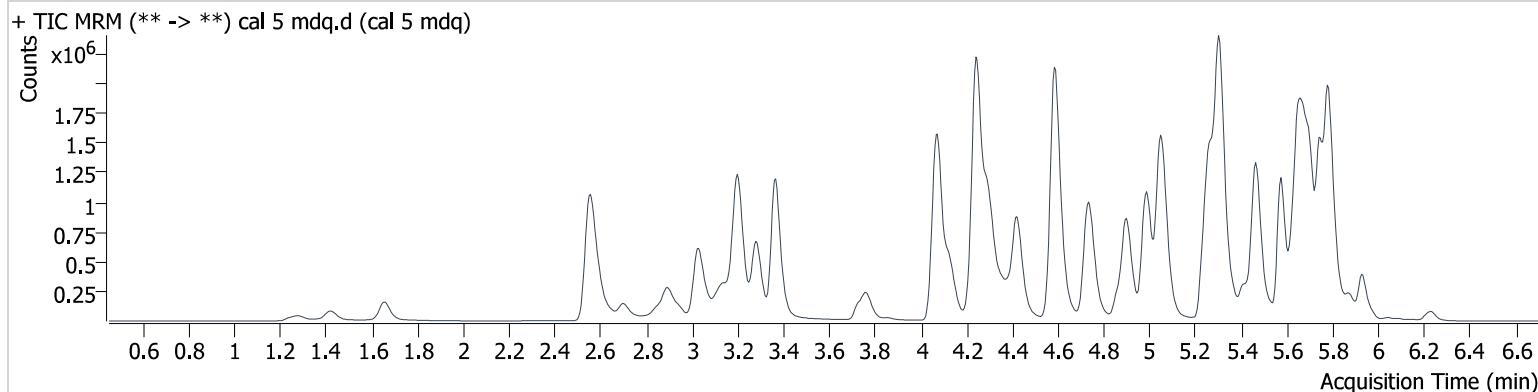
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Calibration Last Update 11/20/2024 1:35:03 PM

Instrument 69679
Type Cal
Acq. Method mdqp1 121523.m
Sample Position P2-E1
Injection Volume 3
Acq. Date-Time 11/19/2024 12:43:36 PM
Sample Info.

Data File cal 5 mdq.d
Sample cal 5 mdq
Operator Anne Nord
Comment Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoclonazepam	4.270	160768	581391.0	110.54	241275.1	65433	93.465 ng/ml
Amphetamine	3.026	555226	47624.6	262.75	404245.4	196530	90.601 ng/ml
Bromazolam	5.791	135086	3281.7	104.57	5898.0	48452	99.934 ng/ml
Buprenorphine	6.232	104415	19793.1	15.20	3205.3	115738	10.544 ng/ml
Clonazepam	5.589	48728	144096.3	33.02	13633.9	9477	97.969 ng/ml
Duloxetine	5.648	147832	1031.0	10.34	7883.5	47150	101.693 ng/ml
Hydroxyzine	5.775	1028817	65767.3	126.73	∞	855431	100.530 ng/ml
Lamotrigine	4.364	452038	∞	94.80	1400089.1	196530	576.707 ng/ml
Methamphetamine	3.205	1674376	∞	37.94	48978.8	583328	102.776 ng/ml
Mitragynine	5.410	479871	2454696.5	30.97	61683.3	752425	86.918 ng/ml
Norbuprenorphine	5.010	7204	1391.4	97.64	1142.4	12071	9.687 ng/ml
O-desmethyl-tramadol	3.366	2252871	768227.7	6.63	74936.3	1027550	99.450 ng/ml
Sertraline	5.788	268475	215916.4	102.64	∞	109130	95.906 ng/ml
Tramadol	4.246	2072133	17116.7	3.99	11485.6	1028369	100.647 ng/ml

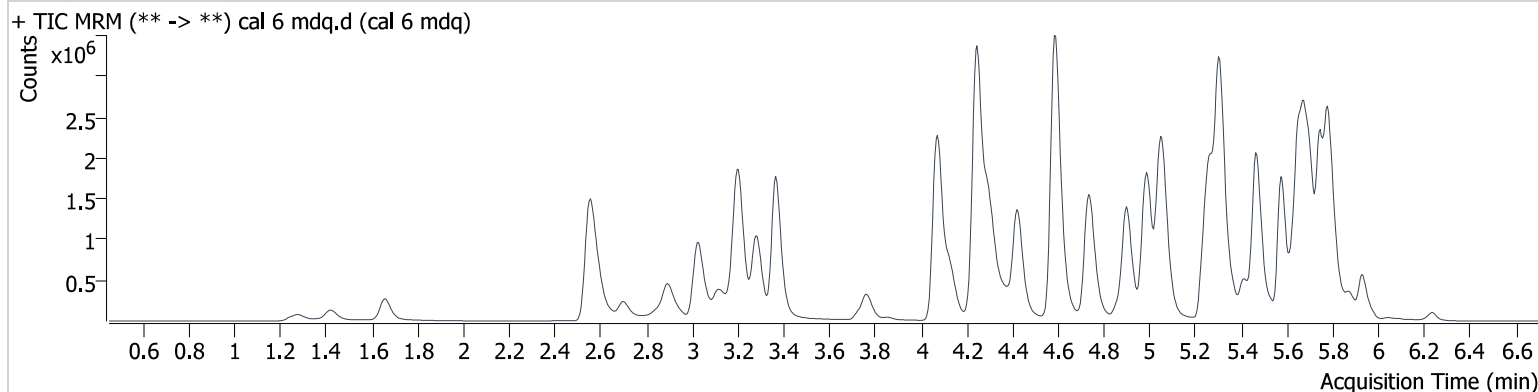
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Calibration Last Update 11/20/2024 1:35:03 PM

Instrument 69679
Type Cal
Acq. Method mdqp1 121523.m
Sample Position P2-F1
Injection Volume 3
Acq. Date-Time 11/19/2024 12:52:18 PM
Sample Info.

Data File cal 6 mdq.d
Sample cal 6 mdq
Operator Anne Nord
Comment Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
7-aminoclonazepam	4.270	271226	1932868.4	109.24	74062.2	40664	252.161	ng/ml
Amphetamine	3.031	924340	19719.5	251.84	116720.2	134919	220.626	ng/ml
Bromazolam	5.791	207706	8378.0	93.33	6529.0	27984	264.964	ng/ml
Buprenorphine	6.237	174960	22608.9	15.70	2899.1	82445	24.725	ng/ml
Clonazepam	5.589	88832	137686.1	32.31	29379.2	6570	256.689	ng/ml
Duloxetine	5.648	208713	12220.8	11.43	15060.2	27295	247.419	ng/ml
Hydroxyzine	5.775	1673670	∞	127.98	247581.5	560964	248.574	ng/ml
Lamotrigine	4.364	633521	532080.2	91.06	1630179.4	134919	1184.273	ng/ml
Methamphetamine	3.205	2722296	∞	37.54	30242.0	419037	236.580	ng/ml
Mitragynine	5.410	866294	115708.8	28.33	110900.9	482741	242.082	ng/ml
Norbuprenorphine	5.010	10939	1311.8	96.83	452.4	7331	24.428	ng/ml
O-desmethyl-tramadol	3.366	4128083	286756.1	6.51	∞	742297	252.165	ng/ml
Sertraline	5.788	361427	90035.1	98.61	795530.6	55251	253.553	ng/ml
Tramadol	4.246	3490700	∞	4.04	∞	687997	253.309	ng/ml

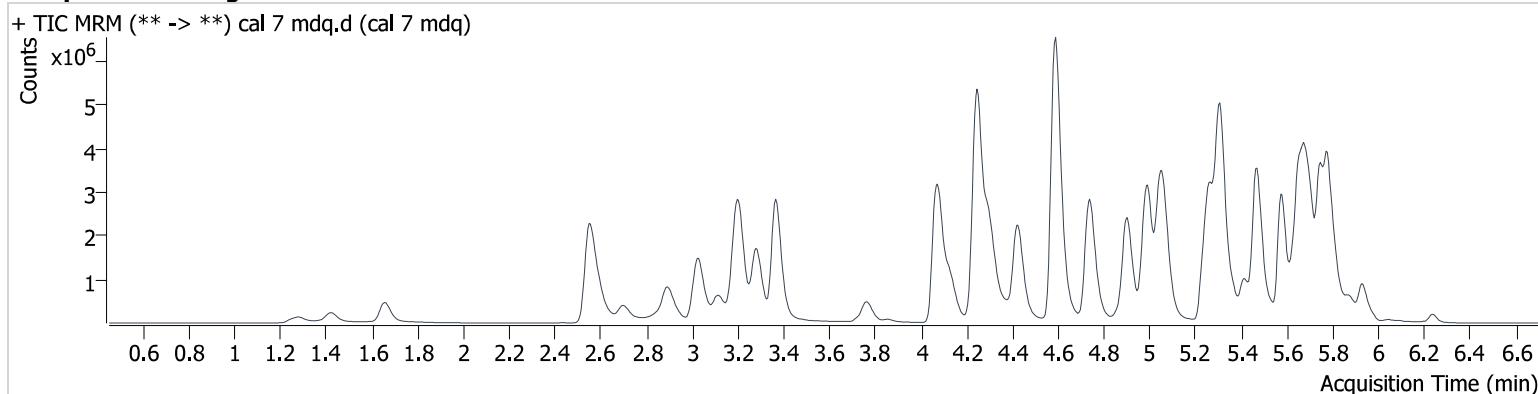
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Calibration Last Update 11/20/2024 1:35:03 PM

Instrument 69679
Type Cal
Acq. Method mdqp1 121523.m
Sample Position P2-G1
Injection Volume 3
Acq. Date-Time 11/19/2024 1:01:00 PM
Sample Info.

Data File cal 7 mdq.d
Sample cal 7 mdq
Operator Anne Nord
Comment Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoclonazepam	4.270	353101	∞	111.22	469845.2	26313	506.397 ng/ml
Amphetamine	3.026	1454498	125464.3	251.71	362886.1	122991	381.303 ng/ml
Bromazolam	5.797	284957	5080.4	98.72	∞	19612	518.068 ng/ml
Buprenorphine	6.237	369985	39006.4	15.83	5153.8	84603	50.893 ng/ml
Clonazepam	5.589	147563	724457.4	30.82	117676.7	5271	530.841 ng/ml
Duloxetine	5.648	268216	5047.5	12.02	7257.3	16911	512.743 ng/ml
Hydroxyzine	5.775	2788567	201713.2	128.42	180685.4	444118	522.514 ng/ml
Lamotrigine	4.364	825413	∞	89.64	∞	122991	1695.497 ng/ml
Methamphetamine	3.205	4522215	1932266.6	38.90	∞	401210	412.772 ng/ml
Mitragynine	5.415	1750215	792170.6	32.07	190930.9	414101	568.302 ng/ml
Norbuprenorphine	5.015	17150	1591.5	97.07	915.6	5209	54.066 ng/ml
O-desmethyl-tramadol	3.366	7452479	1051686.7	6.38	100418.8	685137	493.158 ng/ml
Sertraline	5.788	493750	2006614.5	98.69	178809.0	38028	502.397 ng/ml
Tramadol	4.246	6058901	∞	3.76	4983.2	605460	499.534 ng/ml

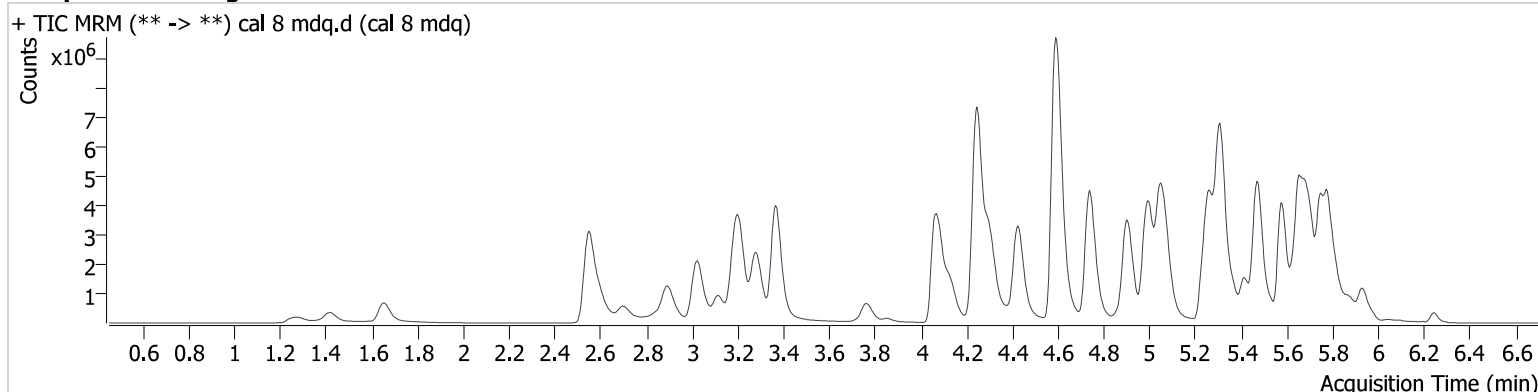
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2024\am 27-28\111924\QuantResults\samples am 28.batch.bin
Calibration Last Update 11/20/2024 1:35:03 PM

Instrument 69679
Type Cal
Acq. Method mdqp1 121523.m
Sample Position P2-H1
Injection Volume 3
Acq. Date-Time 11/19/2024 1:44:21 PM
Sample Info.

Data File cal 8 mdq.d
Sample cal 8 mdq
Operator Anne Nord
Comment Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoclonazepam	4.270	372797	3020590.0	108.53	71526.2	12614	1114.183 ng/ml
Amphetamine	3.026	2162967	141292.6	244.85	∞	106118	657.655 ng/ml
Bromazolam	5.797	292532	∞	104.90	∞	10375	1004.712 ng/ml
Buprenorphine	6.242	674288	55283.7	15.72	11506.5	82056	95.581 ng/ml
Clonazepam	5.595	172346	∞	33.22	49639.8	3225	1012.880 ng/ml
Duloxetine	5.648	246478	379.6	12.36	1391.1	8850	900.080 ng/ml
Hydroxyzine	5.775	3574087	∞	124.44	244385.3	293311	1013.515 ng/ml
Lamotrigine	4.364	899539	600147.0	91.01	747356.6	106118	2143.314 ng/ml
Methamphetamine	3.205	6778775	249477.2	36.03	753580.3	342272	727.667 ng/ml
Mitragynine	5.410	2663490	579634.9	30.23	494757.7	309354	1156.262 ng/ml
Norbuprenorphine	5.015	20310	3027.9	97.92	1091.2	2977	112.175 ng/ml
O-desmethyl-tramadol	3.366	11444994	908920.3	6.31	174723.8	527933	982.819 ng/ml
Sertraline	5.798	437560	841167.4	119.18	425862.5	16947	998.168 ng/ml
Tramadol	4.246	8933964	∞	3.77	∞	478711	931.526 ng/ml