REVIEWED
By Celena Shrum at 3:31 pm, Jun 02, 2022

5/17/2022

Worklist: 5902

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION	
P2022-1290	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ	
P2022-1321	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ	
P2022-1321	3	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ	
P2022-1354	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ	
P2022-1355	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ	

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 Date: 2/10/2022
Title: Laboratory Manager

Quality Review

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

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

Extraction Date: 05/18/2022 Analyst: Amber Gerheart
Plate lot#: 220316 Plate Retest Date: 09/16/2022
Mobile phase A: 5mM Amm Form + 0.01% FA **Mobile phase B:** 0.01% Formic Acid in MeOH
Blank Blood Lot: Lampire 22B52016-2 **Blank Urine Lot**: N/A
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 pipette 250 ul urine in blank well, add 40 ul BG Turbo, add 100 ul 500 mm sodium phosphate buffer, mix for at least 5 minutes at ambient temperature. Pipette **250µL blood (calibrated pipette) or 250µL hydrolyzed urine** in wells of analytical (standards) plate. **Pipette ID:** *42*
☐ 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. Skipped per deviation
☒ 4. Pipette **250µL 0.5M ammonium hydroxide** in wells of analytical plate.
☒ 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
☒ 6. Transfer **300µL of blood+base/urine+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)***
☒ 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. If run contains urine, add 50µL 1% HCl in MeOH to wells and place plate cover on plate before drying (optional). Place on SPE Dry and evaporate to dryness at approx. 35°C.
☒ 16. 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 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? 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:* Cocaethylene, duloxetine, hydroxyzine, methylphenidate, o-desmethylvenlafaxine, topiramate AM 6/2/2022
Calibration Curve Range: ~~chlorpheniramine 10-1000 ng/mL,~~ cocaethylene 5-500 ng/mL, topiramate 10-1000 ng/mL
Chlorpheniramine not evaluated due to calibrator ratios being out.

	1	2	3	4	5	6	7	8	9	10	11	12
A	IS + Cal. 1	IS + QC_1	P2022-1354-1	IS + Cal. 1	IS + QC_1	IS + Sample	IS + Sample	IS + Sample	IS + Cal. 8	IS + Sample	IS + Sample	IS + Cal. 8
B	IS + Cal. 2	IS + QC_2	P2022-1355-1	IS + Cal. 2	IS + QC_2	IS + Sample	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	IS + Sample	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	Negative Blood	IS + Sample	IS + Cal. 5	IS + Sample	IS + Sample	IS + Sample	IS + QC_4	IS + Cal. 4	IS + Sample	IS + QC_4	IS + Cal. 4
F	IS + Cal. 6	P2022-1290-1	IS + Sample	IS + Cal. 6	IS + Sample	IS + Sample	IS + Sample	IS + QC_3	IS + Cal. 3	IS + Sample	IS + QC_3	IS + Cal. 3
G	IS + Cal. 7	P2022-1321-1	IS + Sample	IS + Cal. 7	IS + Sample	IS + Sample	IS + Sample	IS + QC_2	IS + Cal. 2	IS + Sample	IS + QC_2	IS + Cal. 2
H	IS + Cal. 8	P2022-1321-3	IS + Sample	IS + Cal. 8	IS + Sample	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

	1	2	3	4	5	6	7	8	9	10	11	12
A	IS + Cal. 1	IS + QC_1	M2022-1829-4	P2022-1267-1			P2022-1356-1	IS + Cal. 1	IS + QC_1	P2022-1354-1		
B	IS + Cal. 2	IS + QC_2	M2022-1902-3	P2022-1272-1			P2022-1366-1	IS + Cal. 2	IS + QC_2	P2022-1355-1		
C	IS + Cal. 3	IS + QC_3	P2022-1244-2	P2022-1278-3				IS + Cal. 3	IS + QC_3			
D	IS + Cal. 4	IS + QC_4	P2022-1252-1	P2022-1290-1				IS + Cal. 4	IS + QC_4			
E	IS + Cal. 5		P2022-1253-1	P2022-1291-1				IS + Cal. 5	Negative Blood			
F	IS + Cal. 6	Negative Blood	P2022-1254-1	P2022-1321-1		P2022-1333-1		IS + Cal. 6	P2022-1290-1			
G	IS + Cal. 7	M2022-1710-2	P2022-1265-1	P2022-1321-2		P2022-1354-1		IS + Cal. 7	P2022-1321-1			
H	IS + Cal. 8	M2022-1828-2	P2022-1266-1	P2022-1321-3		P2022-1355-1		IS + Cal. 8	P2022-1321-3			

Instrument Plate Positions

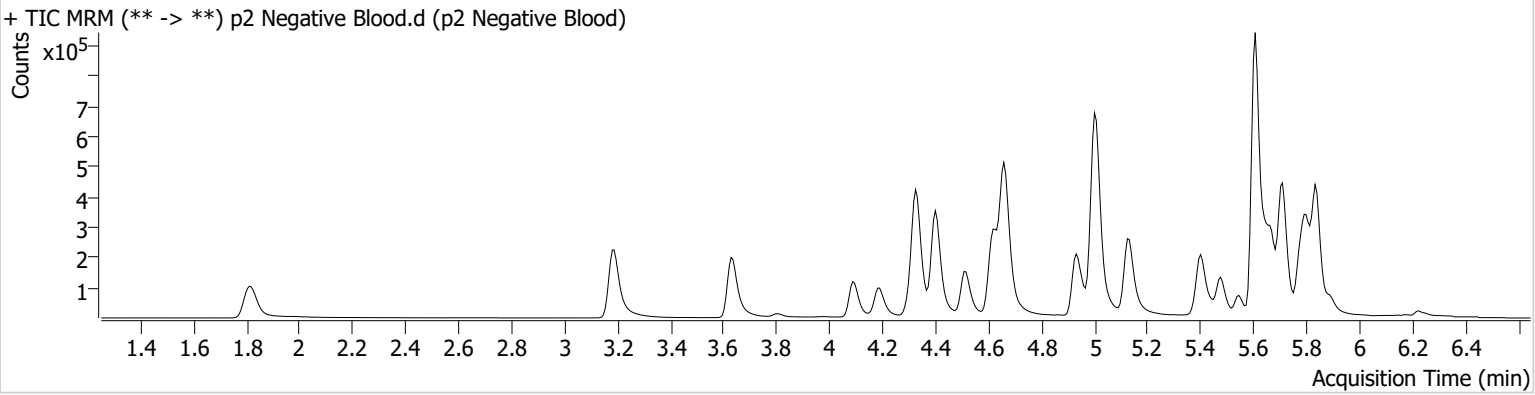
A8-B10 were P2 samples

AM #28 Multi-Drug Quant. Results

Batch results C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Calibration Last Update 5/24/2022 8:07:45 AM

Instrument	Falco (069901)	**Data File**	p2 Negative Blood.d
Type	Sample	**Sample**	p2 Negative Blood
Acq. Method	AM 28 MDQ P2 102521.m	**Operator**	Amber Gerheart
Sample Position	P2-E9	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/19/2022 6:21:31 PM		
Sample Info.			

Sample Chromatogram

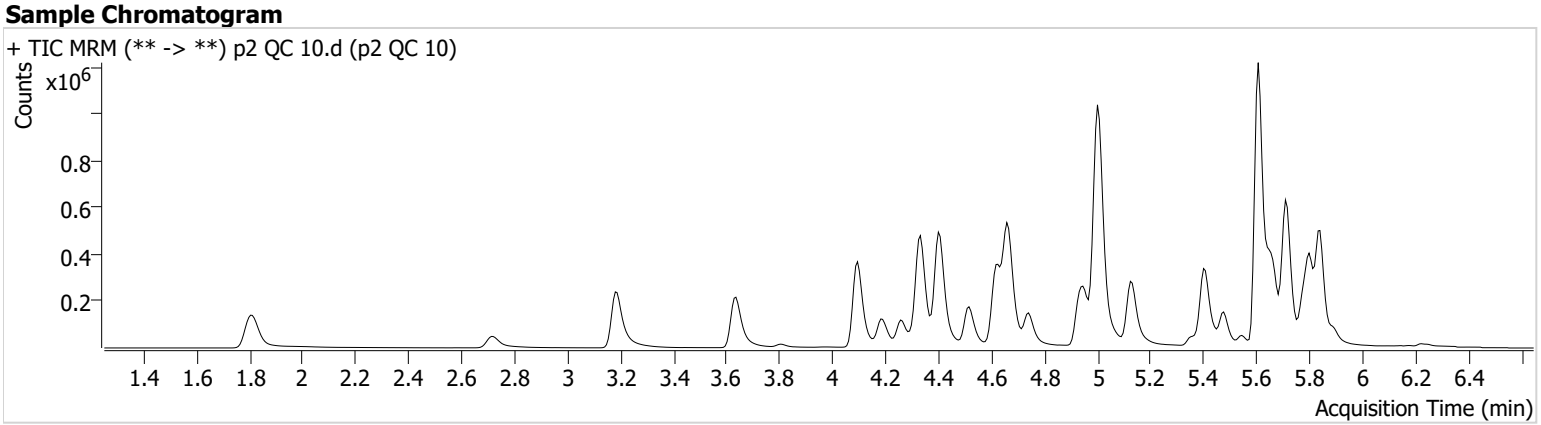


AM #28 Multi-Drug Quant. Results

Batch results C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Calibration Last Update 5/24/2022 8:07:45 AM

Instrument	Falco (069901)	**Data File**	p2 QC 10.d
Type	QC	**Sample**	p2 QC 10
Acq. Method	AM 28 MDQ P2 102521.m	**Operator**	Amber Gerheart
Sample Position	P2-A9	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/19/2022 5:06:23 PM		
Sample Info.			

Sample Chromatogram



	Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
NE	~~Chlorpheniramine~~	~~5.135~~	~~214545~~	~~791.54~~	~~0.2~~	~~16.55~~	~~533841~~	~~9.4842 ng/ml~~
	Cocaethylene	4.741	223110	987.92	42.8	480.18	831685	9.8165 ng/ml
	Duloxetine	5.671	1645	173.29	15.1	196.59	8118	9.5193 ng/ml
	Hydroxyzine	5.716	39768	546.50	63.4	20536.90	174404	10.6734 ng/ml
	Methylphenidate	4.342	298818	1283.76	21.9	732.42	911852	10.0602 ng/ml
	o-Desmethylvenlafaxine	4.096	386169	3541.96	29.5	859.94	340451	10.5008 ng/ml
	Topiramate	4.986	4573	5135.92	35.2	1312.48	73581	6.6922 ng/ml

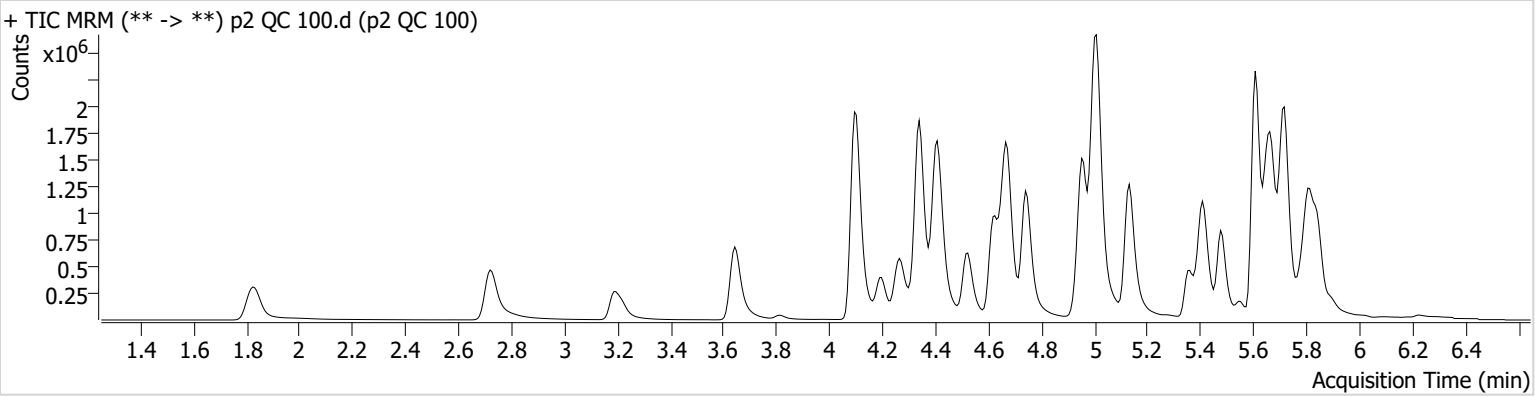
NE = not evaluated

AM #28 Multi-Drug Quant. Results

Batch results C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Calibration Last Update 5/24/2022 8:07:45 AM

Instrument	Falco (069901)	**Data File**	p2 QC 100.d
Type	QC	**Sample**	p2 QC 100
Acq. Method	AM 28 MDQ P2 102521.m	**Operator**	Amber Gerheart
Sample Position	P2-B9	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/19/2022 8:30:20 PM		
Sample Info.			

Sample Chromatogram



	Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
NE	~~Chlorpheniramine~~	~~5.135~~	~~2731105~~	~~8289.93~~	~~0.2~~ **~~Low~~**	~~532.63~~	~~713178~~	~~99.6961 ng/ml~~
	Cocaethylene	4.741	2098735	4375.35	47.4	1631183.91	784536	91.3677 ng/ml
	Duloxetine	5.671	37226	14010.86	13.9	3624.98	17723	110.6291 ng/ml
	Hydroxyzine	5.716	560864	74011.50	67.0	214792.46	262336	104.4207 ng/ml
	Methylphenidate	4.342	3260510	830.84	22.2	5905.05	1041785	96.3773 ng/ml
	o-Desmethylvenlafaxine	4.096	3306074	187993.62	29.1	12941.07	312118	95.8001 ng/ml
	Topiramate	4.986	23291	28582.43	42.0	6949.88	53390	82.1069 ng/ml

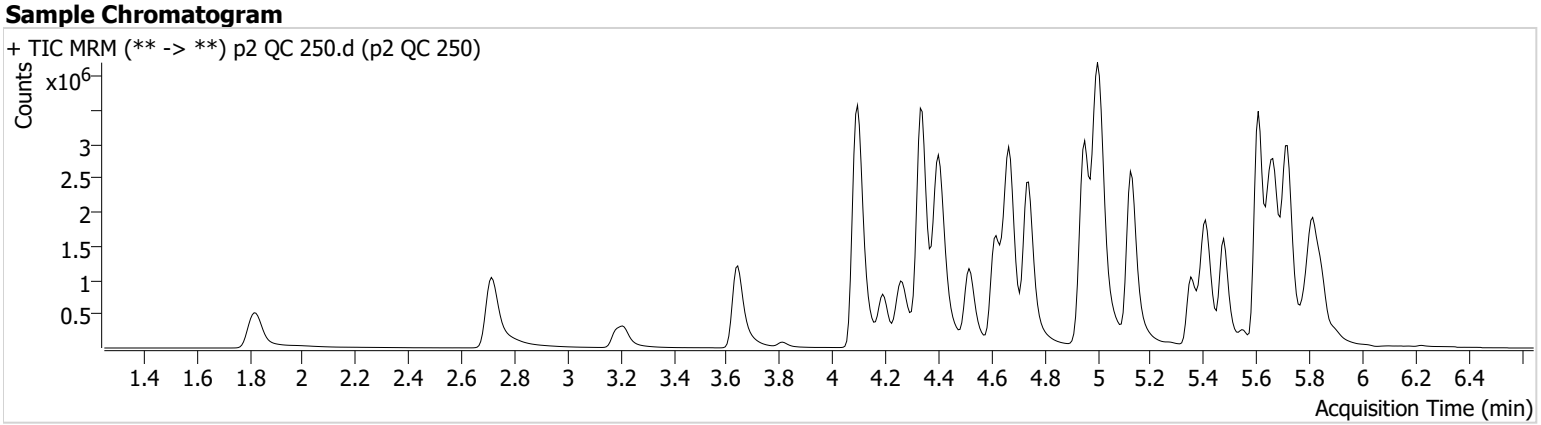
NE = not evaluated

AM #28 Multi-Drug Quant. Results

Batch results C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Calibration Last Update 5/24/2022 8:07:45 AM

Instrument	Falco (069901)	**Data File**	p2 QC 250.d
Type	QC	**Sample**	p2 QC 250
Acq. Method	AM 28 MDQ P2 102521.m	**Operator**	Amber Gerheart
Sample Position	P2-C9	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/19/2022 5:27:51 PM		
Sample Info.			

Sample Chromatogram



	Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
NE	~~Chlorpheniramine~~	~~5.128~~	~~6354251~~	~~7800.38~~	~~0.2~~	~~4187.26~~	~~666429~~	~~249.8554 ng/ml~~
	Cocaethylene	4.741	4446487	29196.18	48.4	336388.13	602102	250.9486 ng/ml
	Duloxetine	5.671	63191	45774.01	13.1	6054.02	12467	268.7599 ng/ml
	Hydroxyzine	5.709	1053467	9598.68	71.9	695879.77	216172	238.6812 ng/ml
	Methylphenidate	4.342	7106253	1700.30	21.9	1802.53	916615	238.7890 ng/ml
	o-Desmethylvenlafaxine	4.096	6998490	213076.89	28.1	41946.95	256627	246.2193 ng/ml
	Topiramate	4.986	38936	10293.01	41.2	3924.01	35037	218.1945 ng/ml

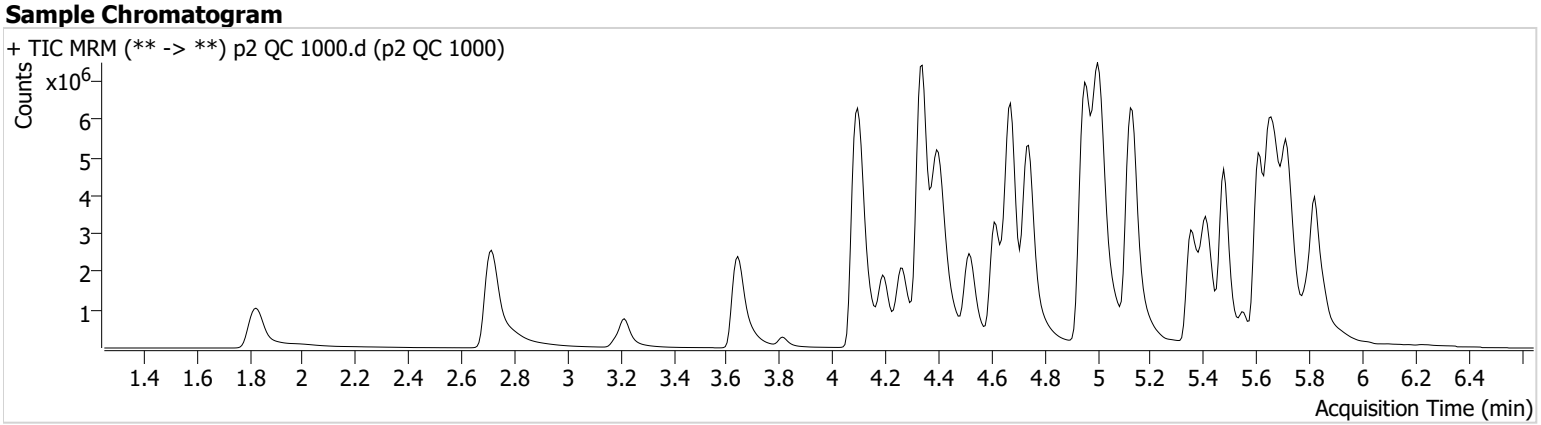
NE = not evaluated

AM #28 Multi-Drug Quant. Results

Batch results C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Calibration Last Update 5/24/2022 8:07:45 AM

Instrument	Falco (069901)	**Data File**	p2 QC 1000.d
Type	QC	**Sample**	p2 QC 1000
Acq. Method	AM 28 MDQ P2 102521.m	**Operator**	Amber Gerheart
Sample Position	P2-D9	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/19/2022 5:49:18 PM		
Sample Info.			

Sample Chromatogram



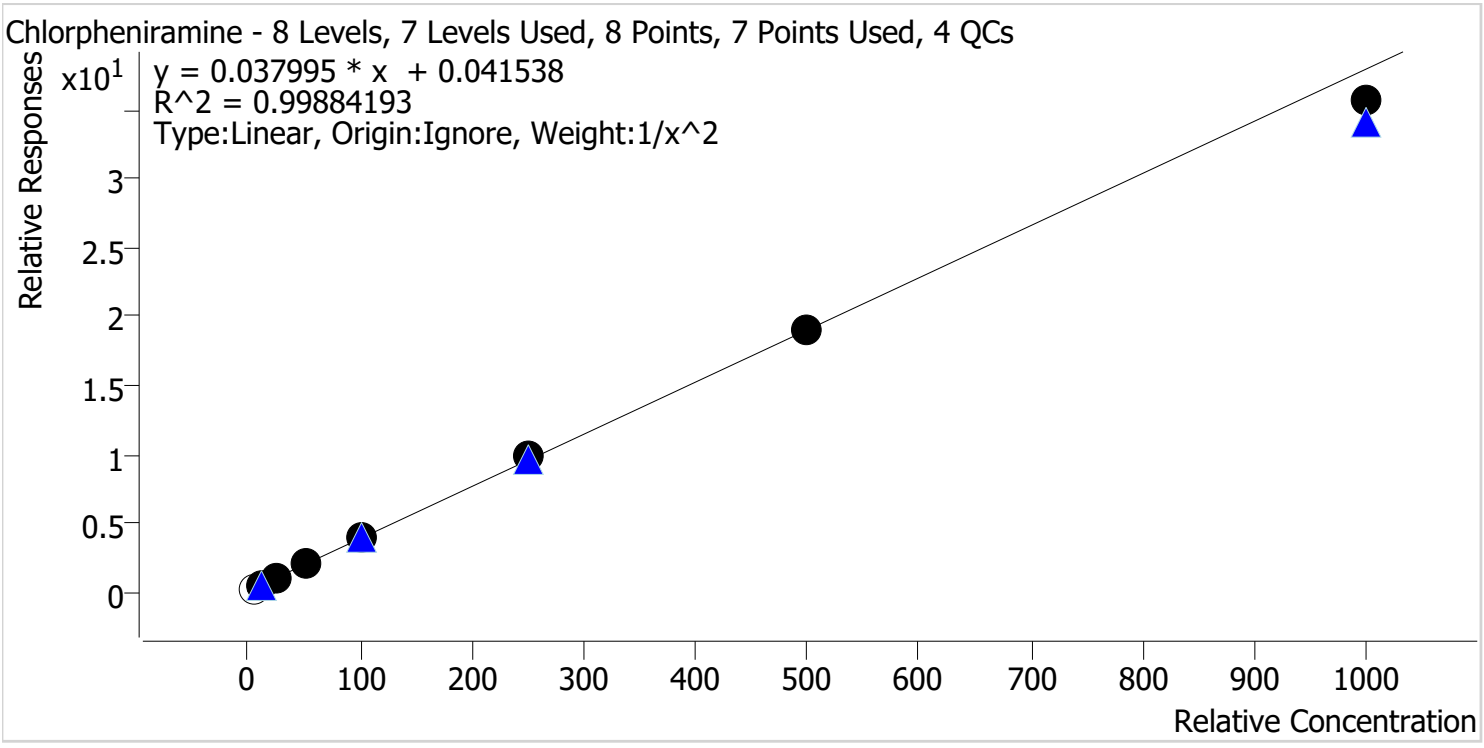
	Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
NE	~~Chlorpheniramine~~	~~5.128~~	~~19591537~~	~~143742.01~~	~~0.2~~	~~222.49~~	~~573836~~	~~897.4837 ng/ml~~
*	~~Cocaethylene~~	~~4.741~~	~~10974437~~	~~76875.46~~	~~50.2~~	~~133799.57~~	~~293835~~	~~1266.2100 ng/ml~~
	Duloxetine	5.671	190948	96611.73	12.4	3276.26	9063	1121.1976 ng/ml
	Hydroxyzine	5.709	3319207	75936.05	74.8	84441.13	184277	883.5850 ng/ml
	Methylphenidate	4.342	17562082	82844.90	22.6	4675.38	593483	911.5392 ng/ml
	o-Desmethylvenlafaxine	4.098	16569496	404856.44	27.7	8842.88	149464	1000.0742 ng/ml
	Topiramate	4.986	60905	24040.92	33.0	11624.47	11642	1048.8014 ng/ml

*Outside curve range

NE = not evaluated

AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results	C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Last Cal. Update	5/24/2022 8:07 AM
Analyst Name	ISP\agerheart
Analyte	Chlorpheniramine
Internal Standard	Chlorpheniramine-D6

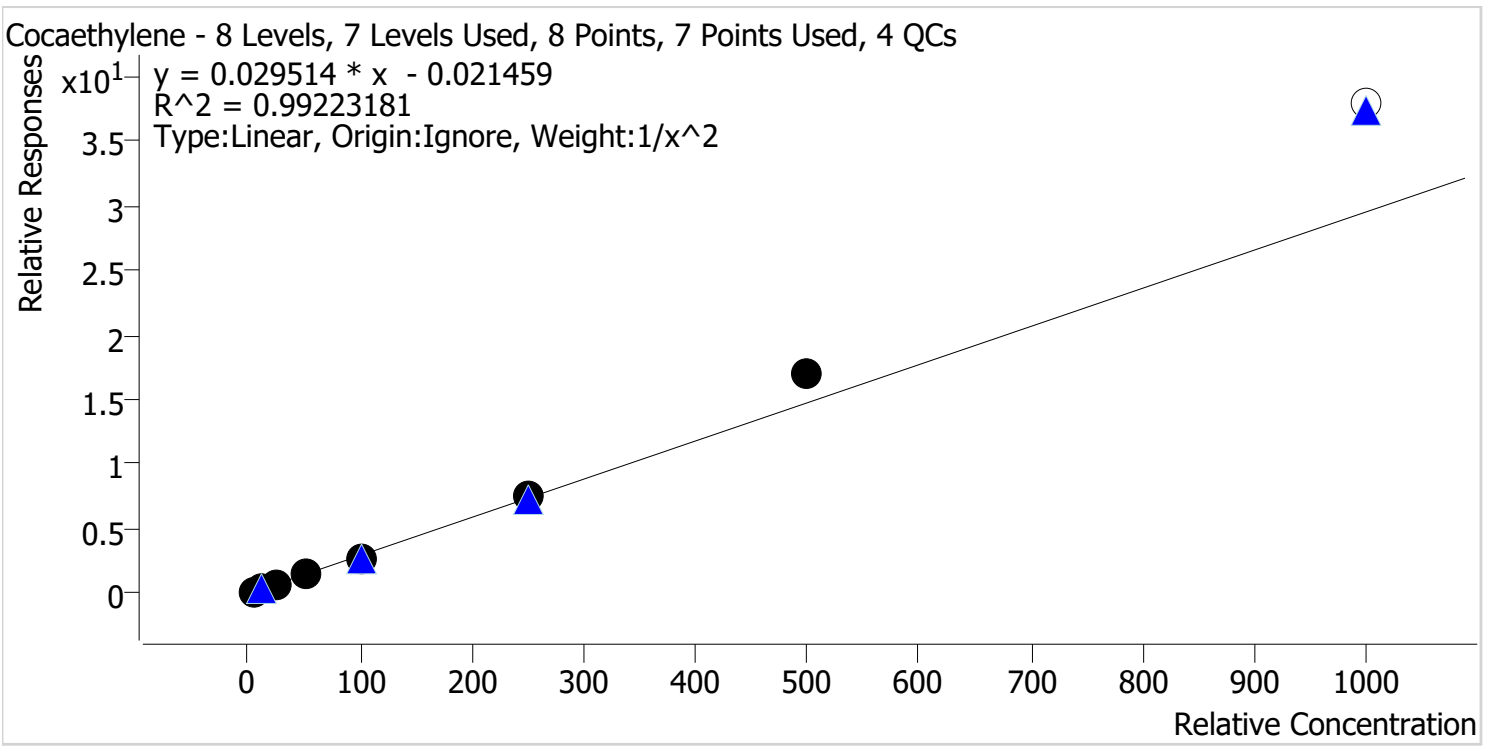


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✗	5.0	4.0	80.6
p2 Cal 2-10ng	2	✔	10.0	9.9	99.1
p2 Cal 3 -25ng	3	✔	25.0	25.3	101.2
p2 Cal 4-50ng	4	✔	50.0	50.4	100.8
p2 Cal 5-100ng	5	✔	100.0	101.6	101.6
p2 Cal 6-250ng	6	✔	250.0	257.6	103.0
p2 Cal 7-500ng	7	✔	500.0	501.4	100.3
p2 Cal 8-1000ng	8	✔	1000.0	939.5	94.0

Compound not evaluated due to ratios being out

AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results	C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Last Cal. Update	5/24/2022 8:07 AM
Analyst Name	ISP\agerheart
Analyte	Cocaethylene
Internal Standard	Tapentadol-D3

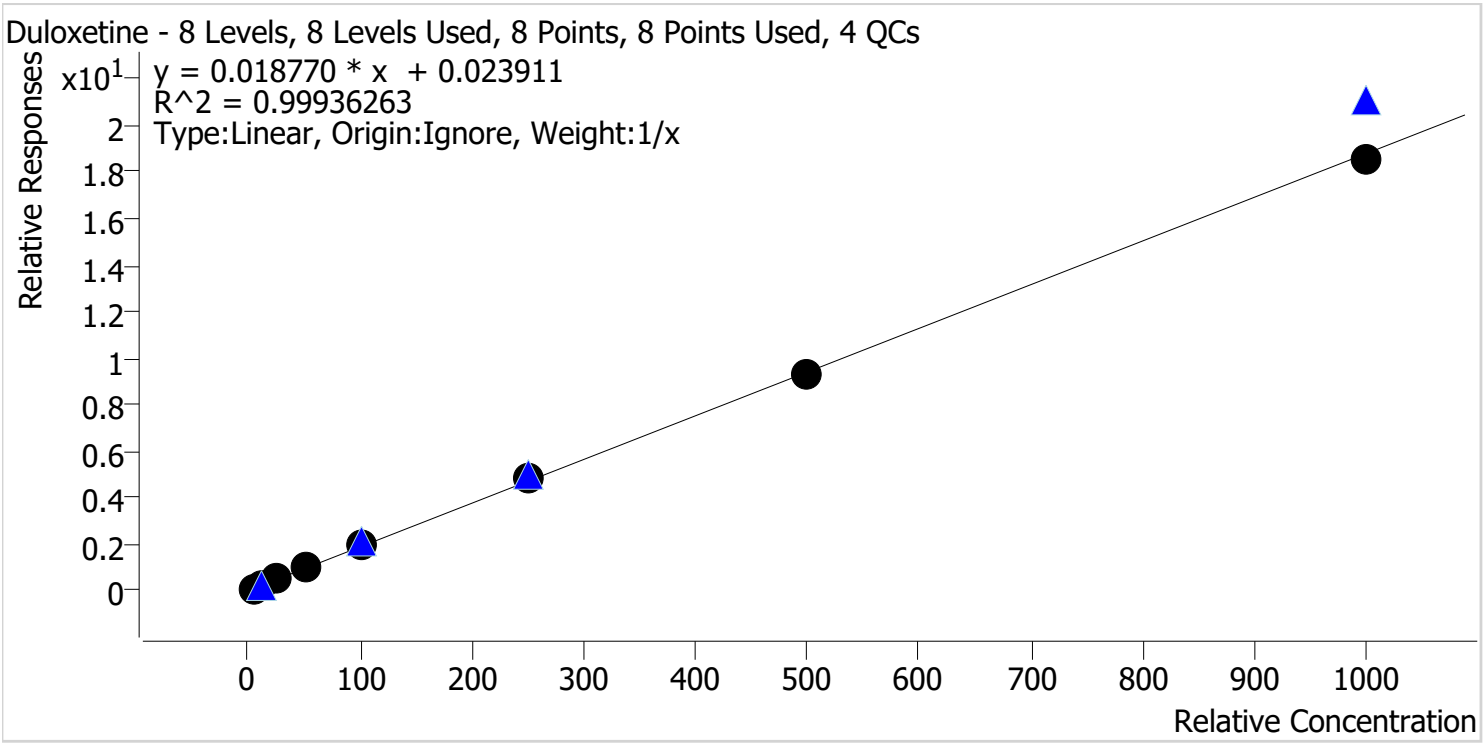


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✔	5.0	5.1	102.6
p2 Cal 2-10ng	2	✔	10.0	9.9	98.6
p2 Cal 3 -25ng	3	✔	25.0	23.4	93.7
p2 Cal 4-50ng	4	✔	50.0	47.5	95.1
p2 Cal 5-100ng	5	✔	100.0	92.9	92.9
p2 Cal 6-250ng	6	✔	250.0	256.8	102.7
p2 Cal 7-500ng	7	✔	500.0	571.8	114.4
p2 Cal 8-1000ng	8	✗	1000.0	1283.7	128.4

Cal 8 dropped due to accuracy

AM #28 Multi-Drug Quant. Calibration Curve Report

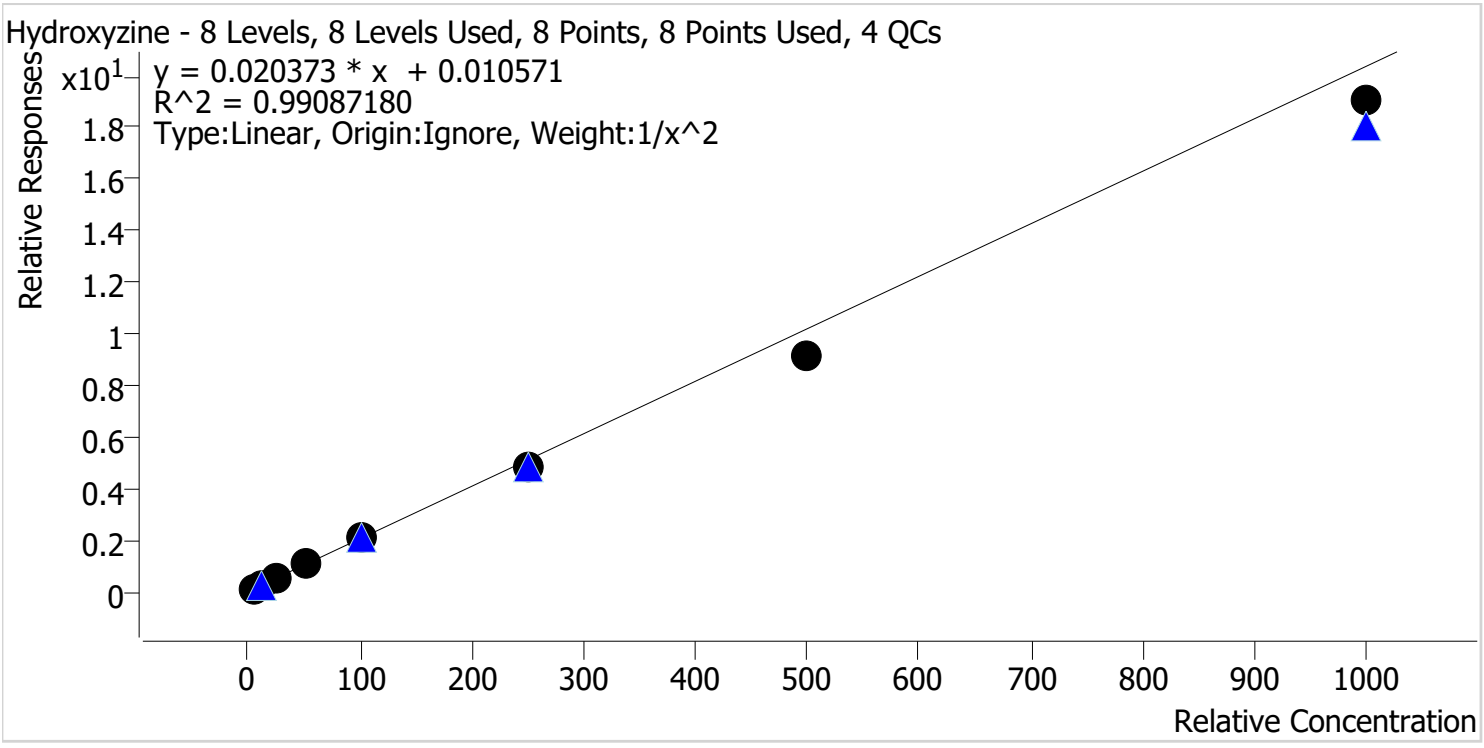
Batch results	C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Last Cal. Update	5/24/2022 8:07 AM
Analyst Name	ISP\agerheart
Analyte	Duloxetine
Internal Standard	Duloxetine-d3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✔	5.0	4.2	84.7
p2 Cal 2-10ng	2	✔	10.0	9.9	98.9
p2 Cal 3 -25ng	3	✔	25.0	26.8	107.4
p2 Cal 4-50ng	4	✔	50.0	53.0	106.0
p2 Cal 5-100ng	5	✔	100.0	100.5	100.5
p2 Cal 6-250ng	6	✔	250.0	261.4	104.6
p2 Cal 7-500ng	7	✔	500.0	495.9	99.2
p2 Cal 8-1000ng	8	✔	1000.0	988.3	98.8

AM #28 Multi-Drug Quant. Calibration Curve Report

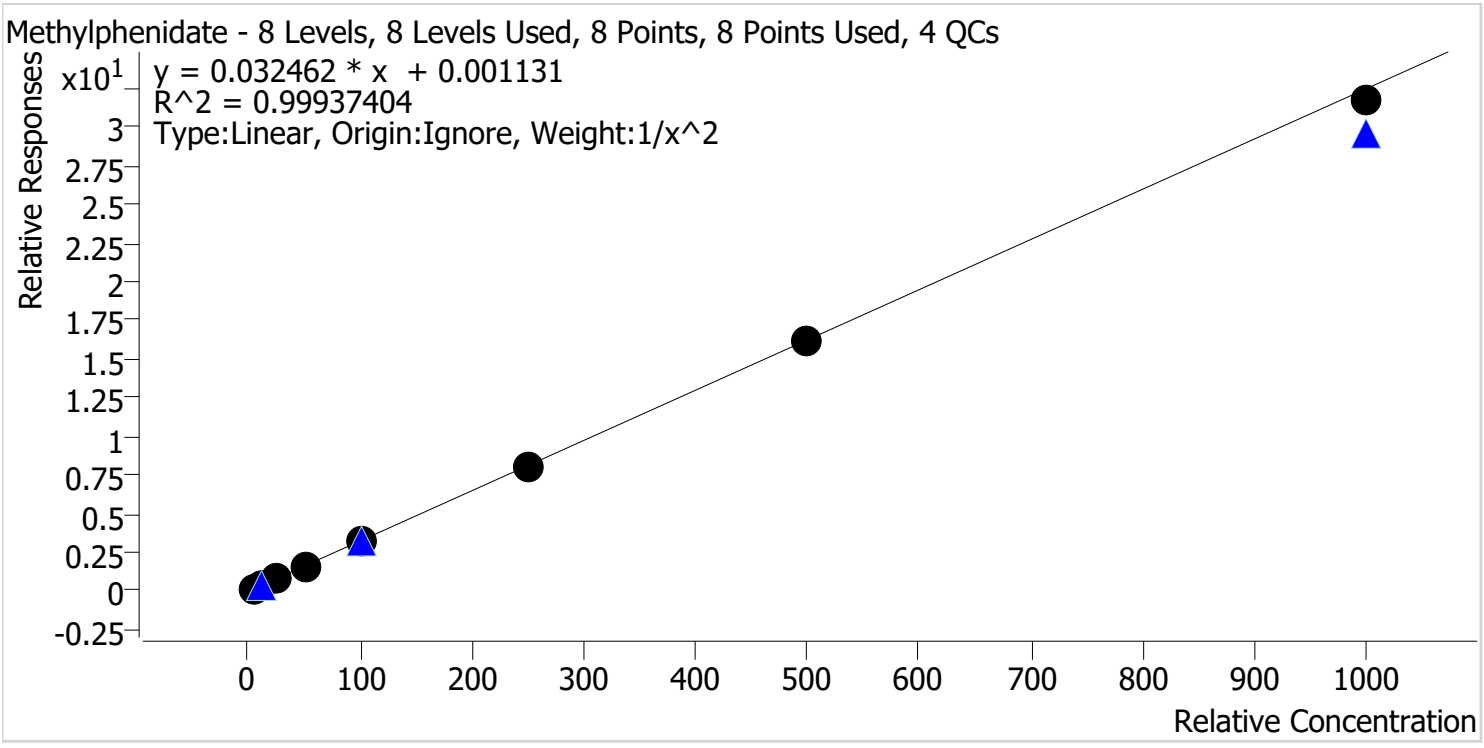
Batch results	C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Last Cal. Update	5/24/2022 8:07 AM
Analyst Name	ISP\agerheart
Analyte	Hydroxyzine
Internal Standard	Clozapine-D4



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✔	5.0	4.6	92.6
p2 Cal 2-10ng	2	✔	10.0	11.1	110.8
p2 Cal 3 -25ng	3	✔	25.0	26.4	105.5
p2 Cal 4-50ng	4	✔	50.0	54.6	109.2
p2 Cal 5-100ng	5	✔	100.0	104.3	104.3
p2 Cal 6-250ng	6	✔	250.0	237.2	94.9
p2 Cal 7-500ng	7	✔	500.0	446.5	89.3
p2 Cal 8-1000ng	8	✔	1000.0	934.7	93.5

AM #28 Multi-Drug Quant. Calibration Curve Report

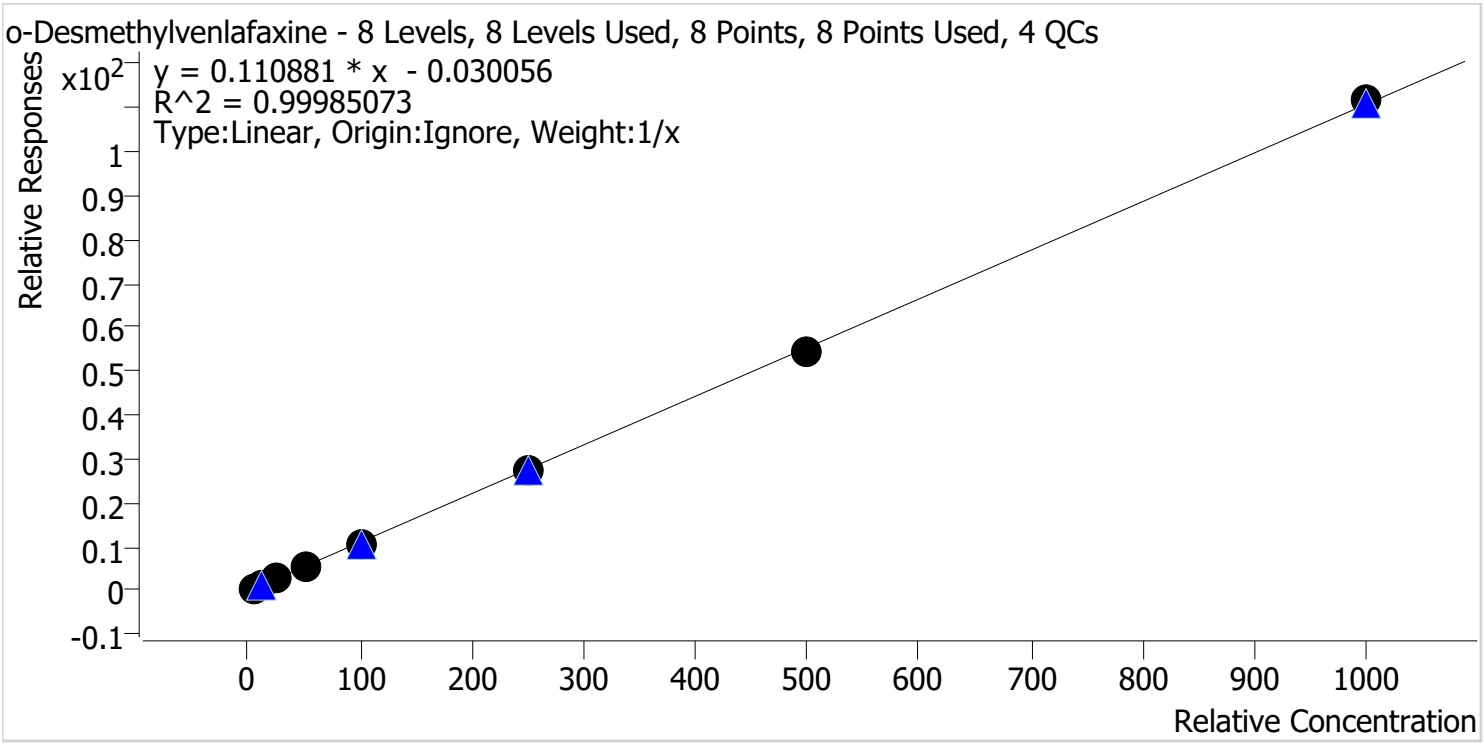
Batch results	C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Last Cal. Update	5/24/2022 8:07 AM
Analyst Name	ISP\agerheart
Analyte	Methylphenidate
Internal Standard	Methylphenidate-D4



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✔	5.0	4.9	97.6
p2 Cal 2-10ng	2	✔	10.0	10.4	104.4
p2 Cal 3 -25ng	3	✔	25.0	25.3	101.2
p2 Cal 4-50ng	4	✔	50.0	49.9	99.7
p2 Cal 5-100ng	5	✔	100.0	99.7	99.7
p2 Cal 6-250ng	6	✔	250.0	250.6	100.3
p2 Cal 7-500ng	7	✔	500.0	497.1	99.4
p2 Cal 8-1000ng	8	✔	1000.0	976.4	97.6

AM #28 Multi-Drug Quant. Calibration Curve Report

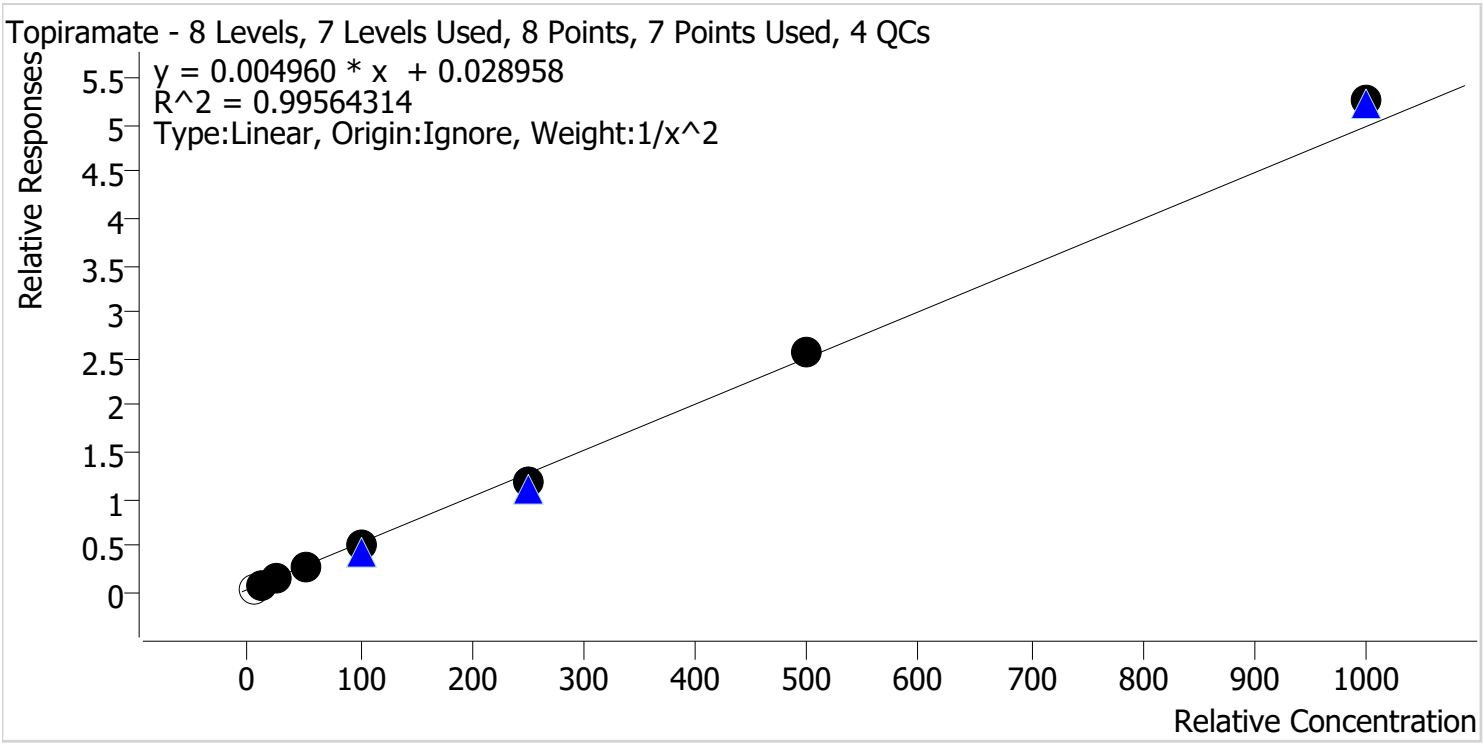
Batch results	C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Last Cal. Update	5/24/2022 8:07 AM
Analyst Name	ISP\agerheart
Analyte	o-Desmethylvenlafaxine
Internal Standard	o-Desmethylvenlafaxine -D6



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✔	5.0	5.1	101.8
p2 Cal 2-10ng	2	✔	10.0	10.4	104.3
p2 Cal 3 -25ng	3	✔	25.0	24.7	98.7
p2 Cal 4-50ng	4	✔	50.0	49.3	98.5
p2 Cal 5-100ng	5	✔	100.0	96.7	96.7
p2 Cal 6-250ng	6	✔	250.0	250.5	100.2
p2 Cal 7-500ng	7	✔	500.0	495.1	99.0
p2 Cal 8-1000ng	8	✔	1000.0	1008.3	100.8

AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Last Cal. Update 5/24/2022 8:07 AM
Analyst Name ISP\agerheart
Analyte Topiramate **Internal Standard** Topiramate-d12



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✗	5.0	0.9	18.3
p2 Cal 2-10ng	2	✔	10.0	9.8	98.1
p2 Cal 3 -25ng	3	✔	25.0	26.4	105.7
p2 Cal 4-50ng	4	✔	50.0	51.2	102.4
p2 Cal 5-100ng	5	✔	100.0	93.4	93.4
p2 Cal 6-250ng	6	✔	250.0	229.4	91.7
p2 Cal 7-500ng	7	✔	500.0	515.3	103.1
p2 Cal 8-1000ng	8	✔	1000.0	1055.9	105.6

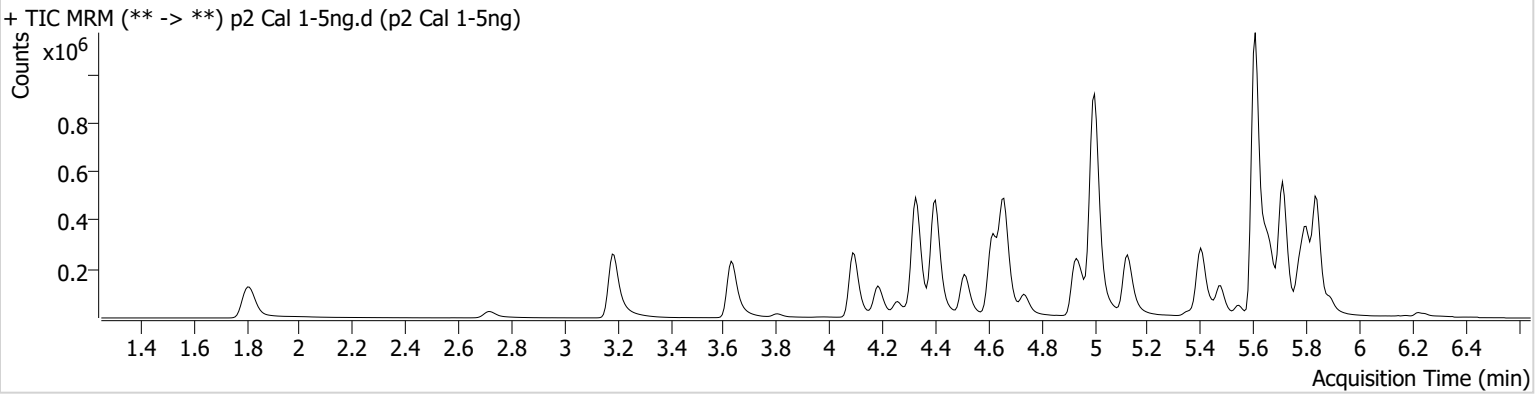
Cal 1 dropped due to ratio being out

AM #28 Multi-Drug Quant. Results

Batch results C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Calibration Last Update 5/24/2022 8:07:45 AM

Instrument	Falco (069901)	**Data File**	p2 Cal 1-5ng.d
Type	Cal	**Sample**	p2 Cal 1-5ng
Acq. Method	AM 28 MDQ P2 102521.m	**Operator**	Amber Gerheart
Sample Position	P2-A8	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/19/2022 3:08:09 PM		
Sample Info.			

Sample Chromatogram



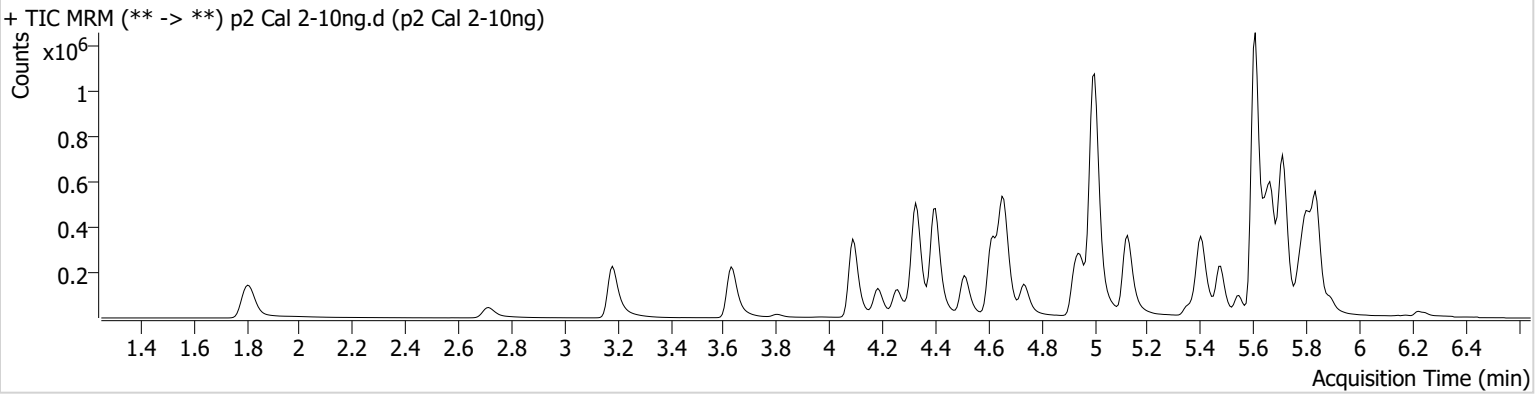
Name	RT	Resp.	S/N	Ratio		S/N	ISTD Resp.	Final Conc.
Chlorpheniramine	5.128	110707	1817.20	0.1	Low	84.68	568832	4.0291 ng/ml
Cocaethylene	4.734	129318	6922.28	43.5		90608.53	995161	5.1300 ng/ml
Duloxetine	5.671	904	176.85	15.0		136.87	8749	4.2327 ng/ml
Hydroxyzine	5.709	20121	489.02	60.8		1504.95	191757	4.6315 ng/ml
Methylphenidate	4.335	174966	2228.92	21.6		3069.39	1096711	4.8797 ng/ml
o-Desmethylvenlafaxine	4.090	203345	74942.04	27.8		8.29	380559	5.0900 ng/ml
Topiramate	4.986	2369	1510.98	51.9	High	1067.15	70713	0.9153 ng/ml

AM #28 Multi-Drug Quant. Results

Batch results C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Calibration Last Update 5/24/2022 8:07:45 AM

Instrument	Falco (069901)	**Data File**	p2 Cal 2-10ng.d
Type	Cal	**Sample**	p2 Cal 2-10ng
Acq. Method	AM 28 MDQ P2 102521.m	**Operator**	Amber Gerheart
Sample Position	P2-B8	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/19/2022 3:19:04 PM		
Sample Info.			

Sample Chromatogram



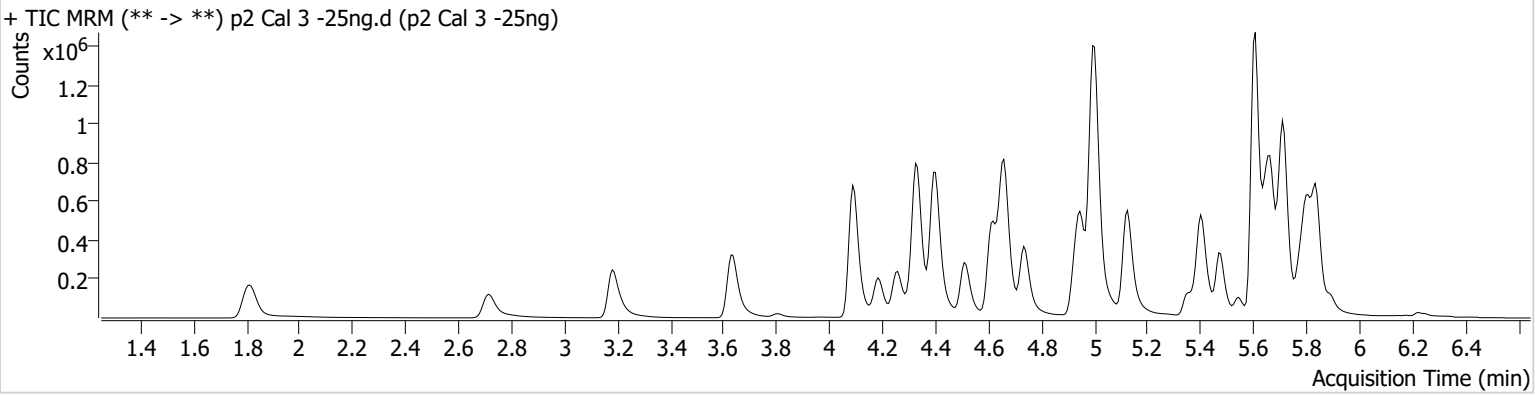
Name	RT	Resp.	S/N	Ratio		S/N	ISTD Resp.	Final Conc.
Chlorpheniramine	5.128	286366	37874.51	0.3	High	83.53	684722	9.9141 ng/ml
Cocaethylene	4.734	220084	1955.90	44.2		88664.81	816469	9.8603 ng/ml
Duloxetine	5.664	5808	4694.07	12.1		1006.39	27706	9.8932 ng/ml
Hydroxyzine	5.709	69717	2700.00	61.8		2083.51	295125	11.0762 ng/ml
Methylphenidate	4.335	318339	7892.14	22.4		1644.79	935914	10.4432 ng/ml
o-Desmethylvenlafaxine	4.090	360945	33090.17	29.8		814.73	320458	10.4292 ng/ml
Topiramate	4.986	5354	2797.85	32.4		2280.14	68967	9.8131 ng/ml

AM #28 Multi-Drug Quant. Results

Batch results C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Calibration Last Update 5/24/2022 8:07:45 AM

Instrument	Falco (069901)	**Data File**	p2 Cal 3 -25ng.d
Type	Cal	**Sample**	p2 Cal 3 -25ng
Acq. Method	AM 28 MDQ P2 102521.m	**Operator**	Amber Gerheart
Sample Position	P2-C8	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/19/2022 3:29:48 PM		
Sample Info.			

Sample Chromatogram



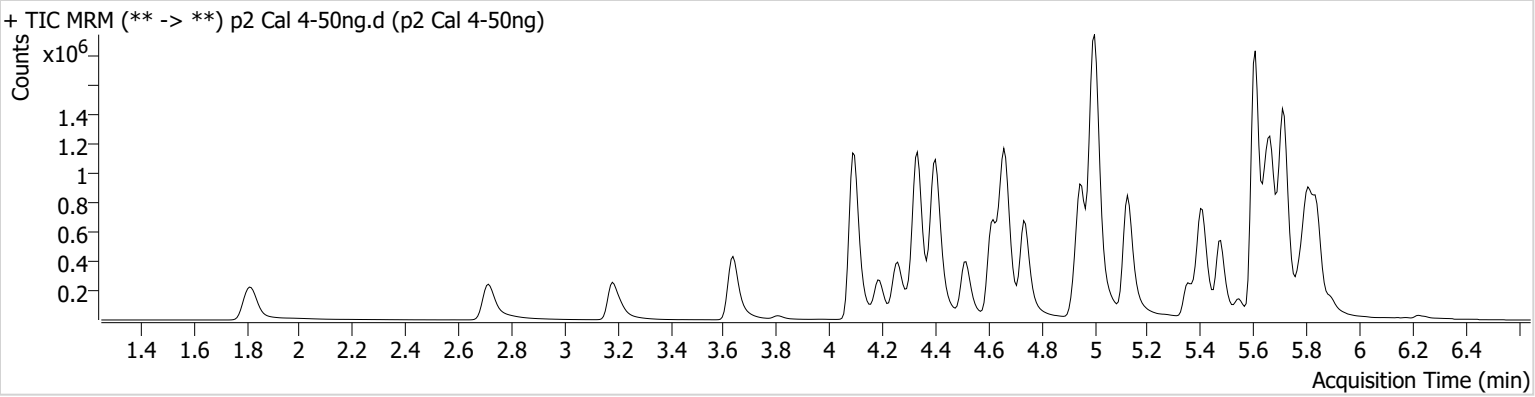
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Chlorpheniramine	5.128	738935	3060.41	0.2	667.72	736991	25.2955 ng/ml
Cocaethylene	4.734	600901	554944.55	44.9	1394.10	896766	23.4311 ng/ml
Duloxetine	5.671	11606	862.25	11.8	1014.81	21995	26.8383 ng/ml
Hydroxyzine	5.709	156929	2137.39	64.2	2895.63	286410	26.3751 ng/ml
Methylphenidate	4.335	882556	9485.47	21.9	2012.79	1072929	25.3045 ng/ml
o-Desmethylvenlafaxine	4.090	911759	63400.25	29.4	3329.77	336977	24.6729 ng/ml
Topiramate	4.986	10296	5980.09	39.7	5102.45	64356	26.4138 ng/ml

AM #28 Multi-Drug Quant. Results

Batch results C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Calibration Last Update 5/24/2022 8:07:45 AM

Instrument	Falco (069901)	**Data File**	p2 Cal 4-50ng.d
Type	Cal	**Sample**	p2 Cal 4-50ng
Acq. Method	AM 28 MDQ P2 102521.m	**Operator**	Amber Gerheart
Sample Position	P2-D8	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/19/2022 3:40:31 PM		
Sample Info.			

Sample Chromatogram



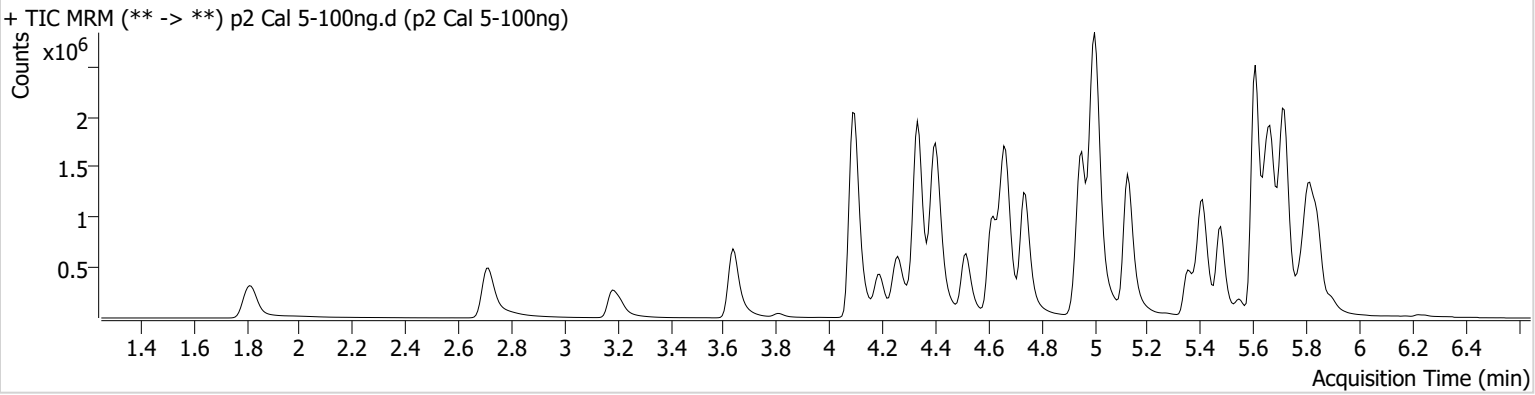
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Chlorpheniramine	5.128	1530887	57439.07	0.2	261.75	782552	50.3946 ng/ml
Cocaethylene	4.734	1145703	4518.23	45.1	783.96	829133	47.5465 ng/ml
Duloxetine	5.671	22603	270.03	14.4	98.70	22179	53.0201 ng/ml
Hydroxyzine	5.709	343414	21432.45	66.2	657.92	305917	54.5816 ng/ml
Methylphenidate	4.335	1675307	6836.27	22.1	6019.24	1034254	49.8641 ng/ml
o-Desmethylvenlafaxine	4.090	1747424	13383.11	29.1	31569.80	321719	49.2561 ng/ml
Topiramate	4.986	17713	19206.19	39.3	4901.65	62613	51.1926 ng/ml

AM #28 Multi-Drug Quant. Results

Batch results C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Calibration Last Update 5/24/2022 8:07:45 AM

Instrument	Falco (069901)	**Data File**	p2 Cal 5-100ng.d
Type	Cal	**Sample**	p2 Cal 5-100ng
Acq. Method	AM 28 MDQ P2 102521.m	**Operator**	Amber Gerheart
Sample Position	P2-E8	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/19/2022 3:51:15 PM		
Sample Info.			

Sample Chromatogram



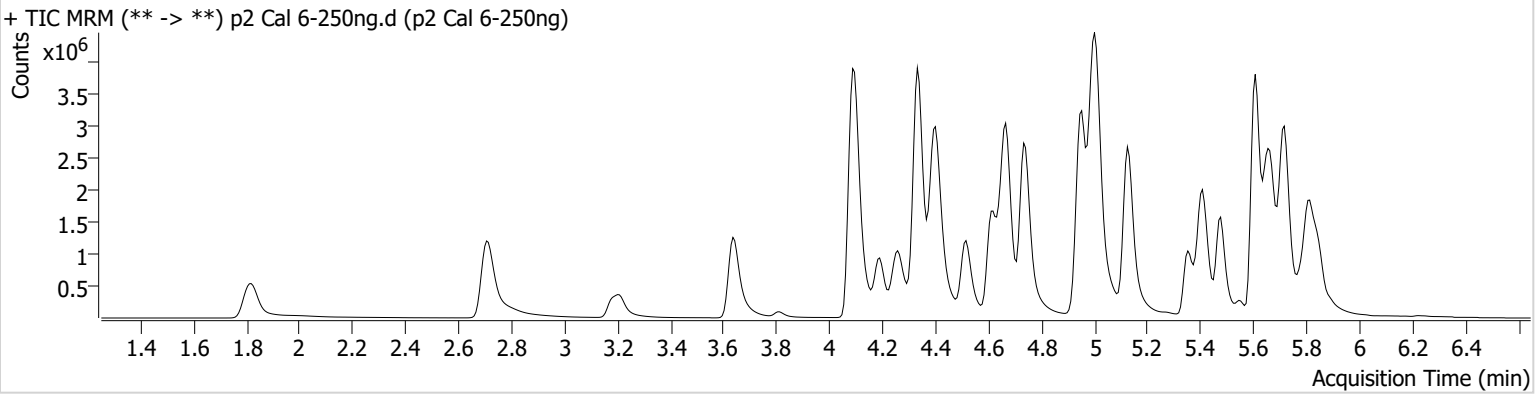
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Chlorpheniramine	5.128	3006270	5862.30	0.2	812.33	770308	101.6227 ng/ml
Cocaethylene	4.734	2173642	101011.53	47.2	94124.82	798854	92.9202 ng/ml
Duloxetine	5.671	39559	33700.82	14.0	4324.64	20716	100.4611 ng/ml
Hydroxyzine	5.709	604623	2533.89	69.5	17005.83	283199	104.2745 ng/ml
Methylphenidate	4.335	3398661	3800.25	22.2	28426.79	1049619	99.7123 ng/ml
o-Desmethylvenlafaxine	4.090	3507793	4528.97	28.7	1643.16	328239	96.6508 ng/ml
Topiramate	4.986	25769	24773.64	41.5	18.89	52335	93.4254 ng/ml

AM #28 Multi-Drug Quant. Results

Batch results C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Calibration Last Update 5/24/2022 8:07:45 AM

Instrument	Falco (069901)	**Data File**	p2 Cal 6-250ng.d
Type	Cal	**Sample**	p2 Cal 6-250ng
Acq. Method	AM 28 MDQ P2 102521.m	**Operator**	Amber Gerheart
Sample Position	P2-F8	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/19/2022 4:02:00 PM		
Sample Info.			

Sample Chromatogram



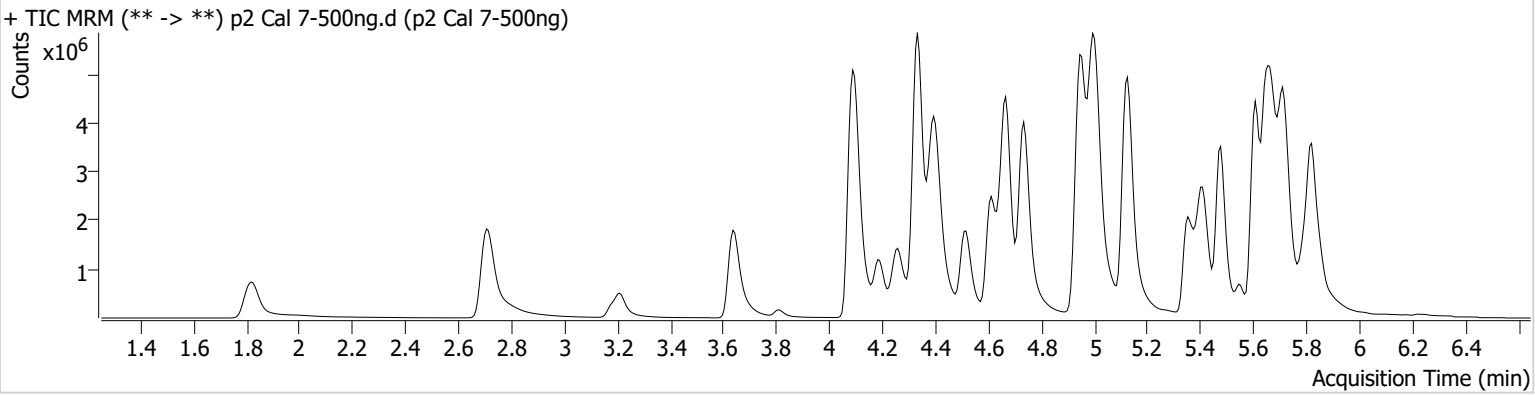
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Chlorpheniramine	5.128	6544564	190950.15	0.2	342.06	665906	257.5745 ng/ml
Cocaethylene	4.734	5024492	170328.02	48.7	11725.00	664928	256.7599 ng/ml
Duloxetine	5.671	47110	35961.88	12.4	164.23	9555	261.3937 ng/ml
Hydroxyzine	5.709	1006712	9170.16	71.4	2214.45	207822	237.2491 ng/ml
Methylphenidate	4.335	7922178	1880.02	22.1	88818.47	973515	250.6487 ng/ml
o-Desmethylvenlafaxine	4.090	7946083	3578.12	28.1	69785.99	286390	250.4994 ng/ml
Topiramate	4.986	42852	42561.58	43.2	28352.27	36730	229.3633 ng/ml

AM #28 Multi-Drug Quant. Results

Batch results C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Calibration Last Update 5/24/2022 8:07:45 AM

Instrument	Falco (069901)	**Data File**	p2 Cal 7-500ng.d
Type	Cal	**Sample**	p2 Cal 7-500ng
Acq. Method	AM 28 MDQ P2 102521.m	**Operator**	Amber Gerheart
Sample Position	P2-G8	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/19/2022 4:12:42 PM		
Sample Info.			

Sample Chromatogram



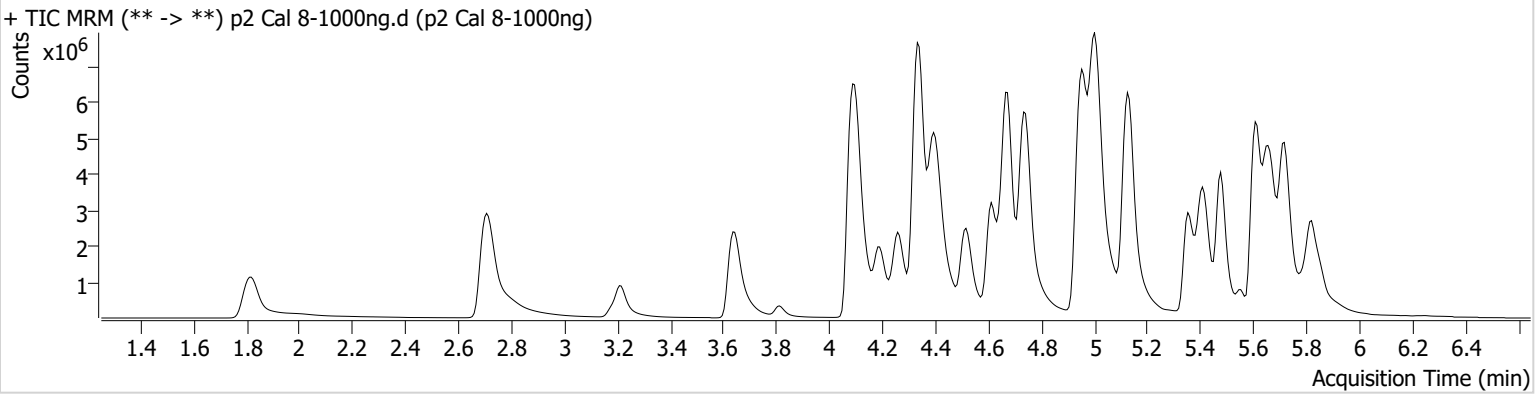
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Chlorpheniramine	5.128	13852939	240909.71	0.2	1013.24	725576	501.4036 ng/ml
Cocaethylene	4.734	7657638	259310.70	49.7	19285.15	454362	571.7733 ng/ml
Duloxetine	5.671	171139	10063.41	13.1	12374.72	18340	495.8583 ng/ml
Hydroxyzine	5.709	2516919	1453000.91	75.3	589224.40	276360	446.5087 ng/ml
Methylphenidate	4.335	12808558	430539.71	21.9	201563.15	793758	497.0567 ng/ml
o-Desmethylvenlafaxine	4.090	11518983	413908.23	27.9	38722.47	209929	495.1336 ng/ml
Topiramate	4.979	52915	47662.45	39.0	15160.31	20469	515.3136 ng/ml

AM #28 Multi-Drug Quant. Results

Batch results C:\Users\agerheart\Desktop\051822 AM 27 28 AG\QuantResults\evaluated AM 28 p2.batch.bin
Calibration Last Update 5/24/2022 8:07:45 AM

Instrument	Falco (069901)	**Data File**	p2 Cal 8-1000ng.d
Type	Cal	**Sample**	p2 Cal 8-1000ng
Acq. Method	AM 28 MDQ P2 102521.m	**Operator**	Amber Gerheart
Sample Position	P2-H8	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/19/2022 4:23:26 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Chlorpheniramine	5.128	18834702	121440.95	0.2	14110.50	526997	939.5497 ng/ml
Cocaethylene	4.741	12239249	310827.12	50.2	75963.78	323229	1283.7139 ng/ml
Duloxetine	5.671	83980	48659.08	13.4	7231.69	4521	988.3026 ng/ml
Hydroxyzine	5.709	2827582	3258.83	74.5	129475.26	148407	934.6765 ng/ml
Methylphenidate	4.335	18641951	108898.39	22.5	106872.59	588102	976.4440 ng/ml
o-Desmethylvenlafaxine	4.090	18257717	366180.03	27.7	114644.82	163354	1008.2680 ng/ml
Topiramate	4.986	69263	86182.87	42.5	16.22	13151	1055.9472 ng/ml