11/20/2020

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REVIEWED
By Britany Wylie at 12:42 pm, Nov 20, 2020

Worklist: 4606

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
P2020-3109	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ

11/19/2020

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Worklist: 4614

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION	
C2020-2095	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ	
P2020-2812	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ	
P2020-2875	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ	
P2020-3167	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ	
P2020-3171	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ	

11/20/2020

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Worklist: 4615

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION	
P2020-2951	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ	
P2020-2965	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ	
P2020-2986	1	BCK	AM 28 Blood Multi-Drug Quant Panel 2 by LC-QQQ	

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

Extraction Date: 11/19/20
Plate lot#: Item #: IDP-112-2 Lot:200514

Analyst: Tamara Salazar
Plate Expiration: 11/14/20

Mobile phase A: 5mM Amm Form + 0.01% FA
0.5M Ammonium Hydroxide
Blank Blood Lot: Lampire 20K20702
LCMS-QQQ ID: 069901

Mobile phase B: 0.01% Formic Acid in MeOH
Ethyl Acetate 20% Methanol in Water
Column: Agilent 120 EC-C18 (2.1x 100-2.7um)

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. Pipette **250µL blood (calibrated pipette) Pipette ID: 42** in wells of analytical (standards) plate.
☒ 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
☒ 4. Pipette **250µL 00.5M ammonium hydroxide** in wells of analytical plate.
☒ 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
☒ 6. Transfer blood+base mixture to corresponding wells of SLE+ plate.
☒ 7. Apply positive pressure for approx. 10-15 seconds (or until no liquid remains on top of sorbent). ***(Load at 85-100 PSI- Selector to the right)***
☒ 8. Wait 5 minutes.
☒ 9. Add **900uL ethyl acetate.**
☒ 10. Wait 5 minutes.
☒ 11. Apply positive pressure for approx. 15 seconds. ***(10-15 PSI- Selector to the left).***
☒ 12. Add **900uL ethyl acetate.**
☒ 13. Wait 5 minutes.
☒ 14. Apply positive pressure for approx. 15 seconds. ***(10-15 PSI- Selector to the left).***
☒ 15. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C.
☒ 16. Reconstitute in **100µL 20% MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

Post-Analytic

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

COMMENTS: *Compounds evaluated: Amitriptyline 5-1000, Clonazolam 5-500, Doxepin 5-1000, Etizolam 5-250, Flunitrazepam 5-1000, Flurazepam 5-100, Levetiracetam 5-500, Maprotiline 5-250, Methocarbamol 5-250, Midazolam 5-1000, Nortriptyline 5-1000, Pseudoephedrine 5-1000*

Due to extraction occurring after the expiration of the analytical plate, an external control was included with this run.

I, Sophia Jackson, approved of all steps utilized in this method.

I, Sarah Pickle, approved of all steps utilized in this method.

Tamara Salazar, Sophia Jackson, and Sarah Pickle all had samples in this batch. Tamara Salazar acted as the primary analyst and performed steps 3-16.

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Idaho State Police Forensic Services

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

Methanol External Control Solution (Lot: 022420)

100 ul each 1 mg/mL stock solution in 9600 ul MeOH

Component	*Source*	*Source Lot Number*	*Expiration Date*
Methanol (LCMS)	Fisher	193941	
Midazolam	Cerilliant	FE01161704	04/30/2022
Etizolam	Cerilliant	FN06061606	11/30/2020
Flunitrazepam	Cerilliant	FE08051602	08/31/2021
~~Flurazepam~~	~~Cerilliant~~	~~FE02101501~~	~~04/30/2020~~
Prepared:	02/24/2020		
Prepared By:	Celena Shrum		
Expires:	Per AM 21 reference materials used for qualitative purposes do not have an expiration date.		

Flurazepam not evaluated in the external positive control after 04/30/2020.

11/20/2020 TS

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Blood External Control Solution (Lot: WS111920)

50 ul of methanol external control solution was added to 4950ul of blood. Approximately 100ng/mL of each compound.

Component	*Source*	*Source Lot Number*
Negative Blood	Lampire	20K20702
Methanol External Control Solution	-	022420
Prepared:	11/19/2020	
Prepared by:	Tamara Salazar	
Expires:	Per AM 21 reference materials used for qualitative purposes do not have an expiration date.	

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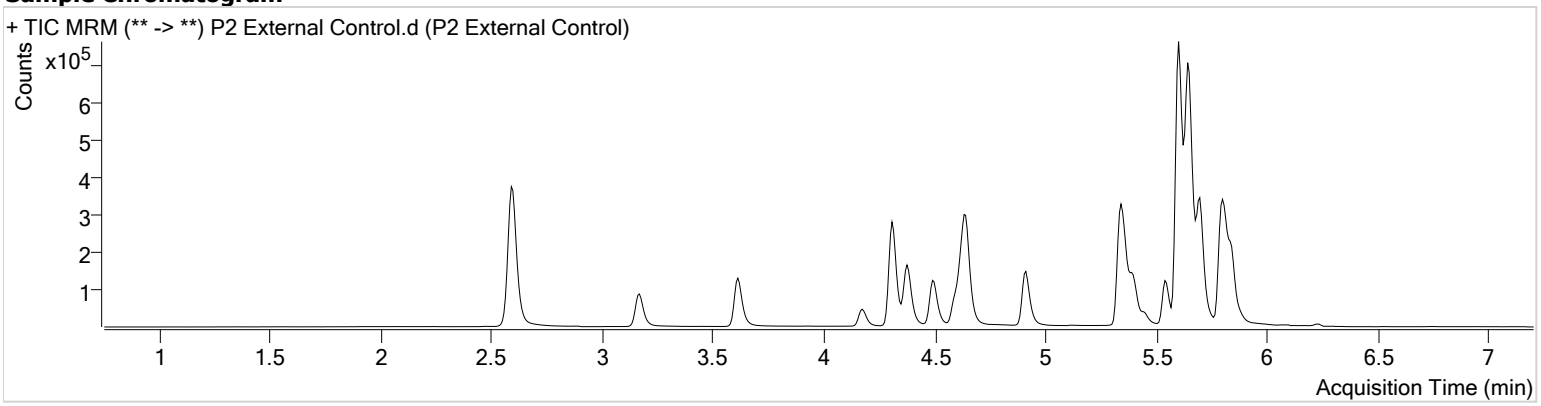
AM #28 Multi-Drug Quant. Results

Batch results	D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Calibration Last Update	11/20/2020 8:51:19 AM

Instrument	Instrument 1	**Data File**	P2 External Control.d
Type	Sample	**Sample**	P2 External Control
Acq. Method	AM 28 MDQ P2.m	**Operator**	Tamara Salazar
Sample Position	P6-F2	**Comment**	
Injection Volume	2		
Acq. Date-Time	11/19/2020 6:19:09 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Etizolam	5.811	206803	∞	27.4	4507.34	502520	54.8136 ng/ml
Flunitrazepam	5.649	444676	3821.88	31.9	5102.15	110749	78.8230 ng/ml
~~Flurazepam~~	~~5.339~~	~~675433~~	~~3618.20~~	~~12.5~~	∞	~~110749~~	~~55.3232 ng/ml~~
Midazolam	5.805	72703	4442.41	89.0	1717.00	111547	69.1828 ng/ml

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*Compound not evaluated.

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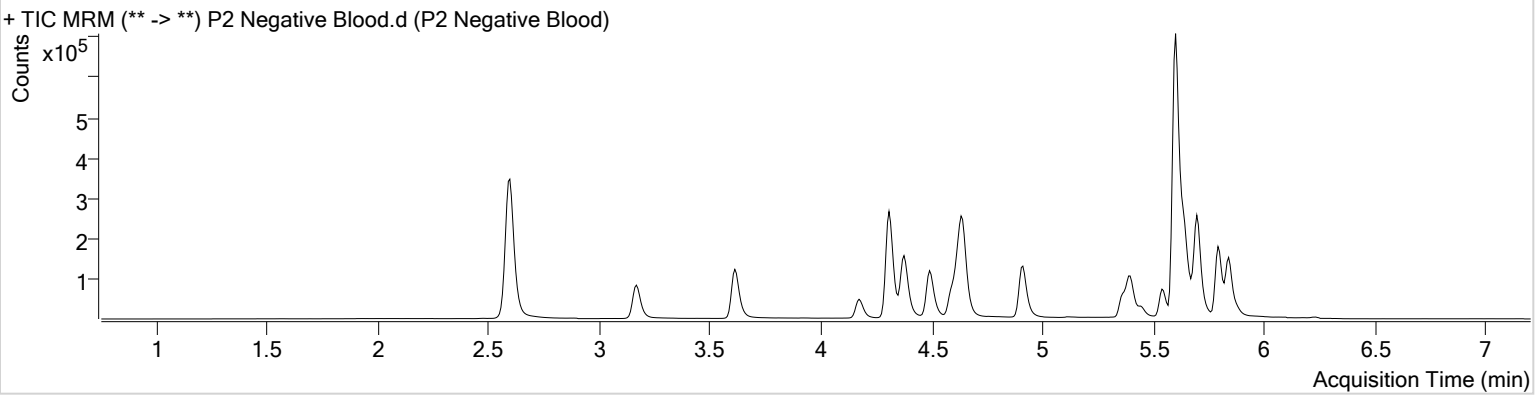
AM #28 Multi-Drug Quant. Results

Batch results	D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Calibration Last Update	11/20/2020 8:51:19 AM

Instrument	Instrument 1	**Data File**	P2 Negative Blood.d
Type	Sample	**Sample**	P2 Negative Blood
Acq. Method	AM 28 MDQ P2.m	**Operator**	Tamara Salazar
Sample Position	P6-E2	**Comment**	
Injection Volume	2		
Acq. Date-Time	11/19/2020 5:47:18 PM		
Sample Info.			

Sample Chromatogram



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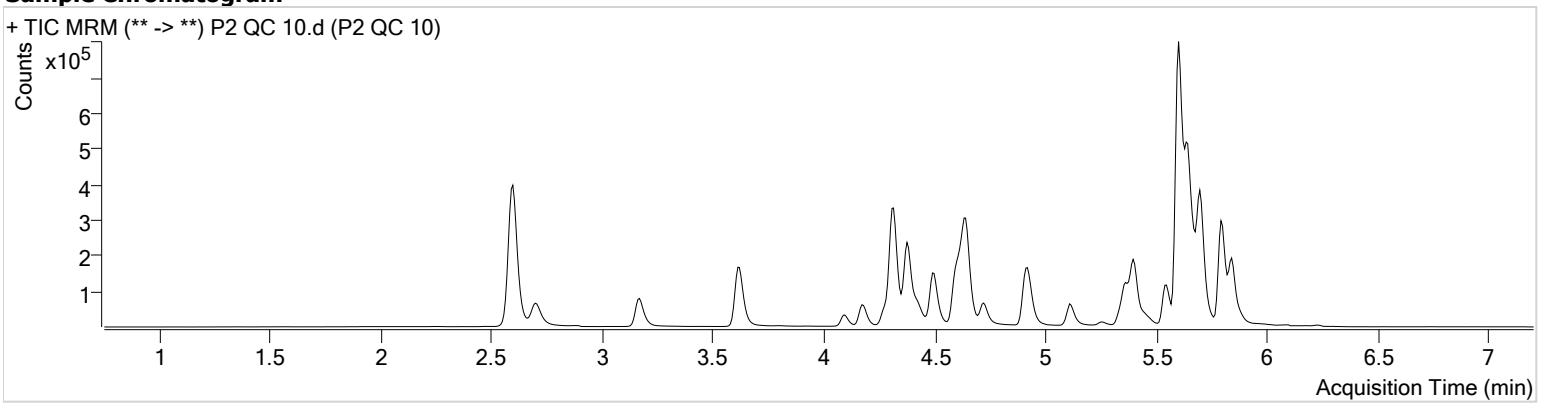
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Calibration Last Update 11/20/2020 8:51:19 AM

Instrument	Instrument 1	**Data File**	P2 QC 10.d
Type	QC	**Sample**	P2 QC 10
Acq. Method	AM 28 MDQ P2.m	**Operator**	Tamara Salazar
Sample Position	P6-A2	**Comment**	
Injection Volume	2		
Acq. Date-Time	11/19/2020 4:12:01 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Amitriptyline	5.671	76023	553.15	41.5	756.52	117057	10.6337 ng/ml
Clonazolam	5.551	27755	51667.19	27.7	11914.66	21961	10.7439 ng/ml
Doxepin	5.363	39327	257.74	41.1	382.94	247286	10.2954 ng/ml
Etizolam	5.811	28364	35182.65	27.6	∞	442267	9.1012 ng/ml
Flunitrazepam	5.649	62418	2398.45	30.1	∞	102220	10.5800 ng/ml
Flurazepam	5.339	91779	9850.29	12.7	8066.99	102220	10.1517 ng/ml
Levetiracetam	2.694	27233	1731.74	180.9	1407.59	963471	10.6950 ng/ml
Maprotiline	5.671	76023	553.15	26.2	463.94	117057	10.4667 ng/ml
Methocarbamol	4.425	27229	∞	76.3	384.11	963471	10.1964 ng/ml
Midazolam	5.805	9781	275.24	89.6	∞	107128	9.8338 ng/ml
Nortriptyline	5.693	34687	∞	26.3	212.82	97287	10.5012 ng/ml
Pseudoephedrine	2.608	210661	6993.16	13.3	∞	963471	10.1271 ng/ml

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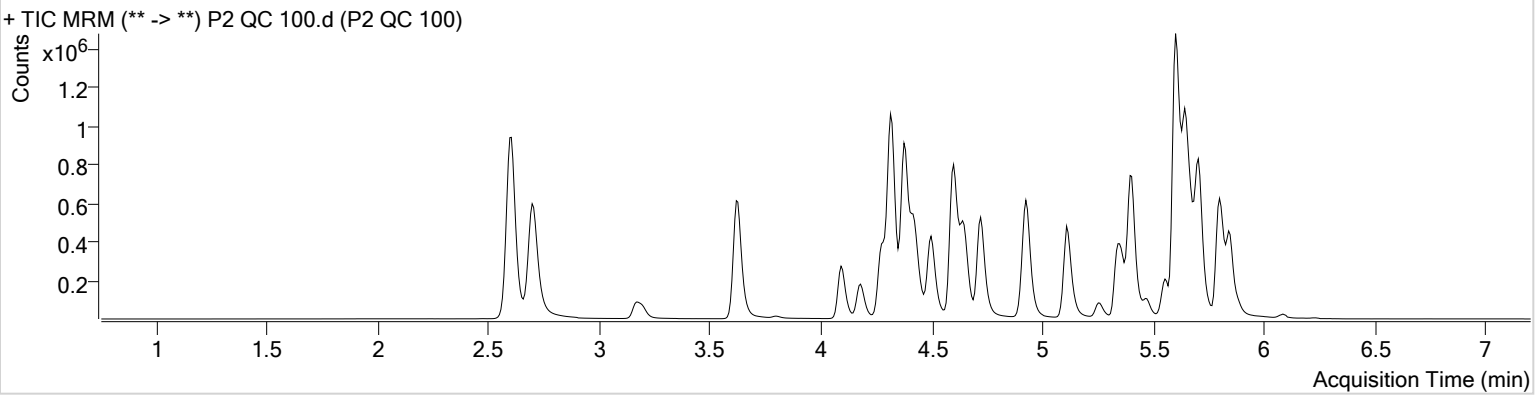
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Calibration Last Update 11/20/2020 8:51:19 AM

Instrument	Instrument 1	**Data File**	P2 QC 100.d
Type	QC	**Sample**	P2 QC 100
Acq. Method	AM 28 MDQ P2.m	**Operator**	Tamara Salazar
Sample Position	P6-B2	**Comment**	
Injection Volume	2		
Acq. Date-Time	11/19/2020 4:33:11 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Amitriptyline	5.671	317277	1791.72	42.4	1241.39	55700	96.2058 ng/ml
Clonazolam	5.558	241297	∞	28.1	∞	19876	115.1129 ng/ml
Doxepin	5.363	230909	1087.02	40.3	1033.98	150016	103.6892 ng/ml
Etizolam	5.811	238796	1842.36	27.4	∞	365949	86.5265 ng/ml
Flunitrazepam	5.649	514011	2501.70	32.0	∞	92454	109.7813 ng/ml
Flurazepam	5.339	769242	∞	12.3	∞	92454	74.6175 ng/ml
Levetiracetam	2.694	230897	10639.75	179.5	10772.59	848888	114.6160 ng/ml
Maprotiline	5.671	317277	1791.72	21.1	∞	55700	92.0109 ng/ml
Methocarbamol	4.425	229739	22256.39	77.2	∞	848888	114.9381 ng/ml
Midazolam	5.805	79470	1054.75	91.3	4513.69	88446	95.3107 ng/ml
Nortriptyline	5.693	116412	1354.92	27.4	1520.03	34123	100.4656 ng/ml
Pseudoephedrine	2.608	1821894	∞	13.1	6528.03	848888	101.1952 ng/ml

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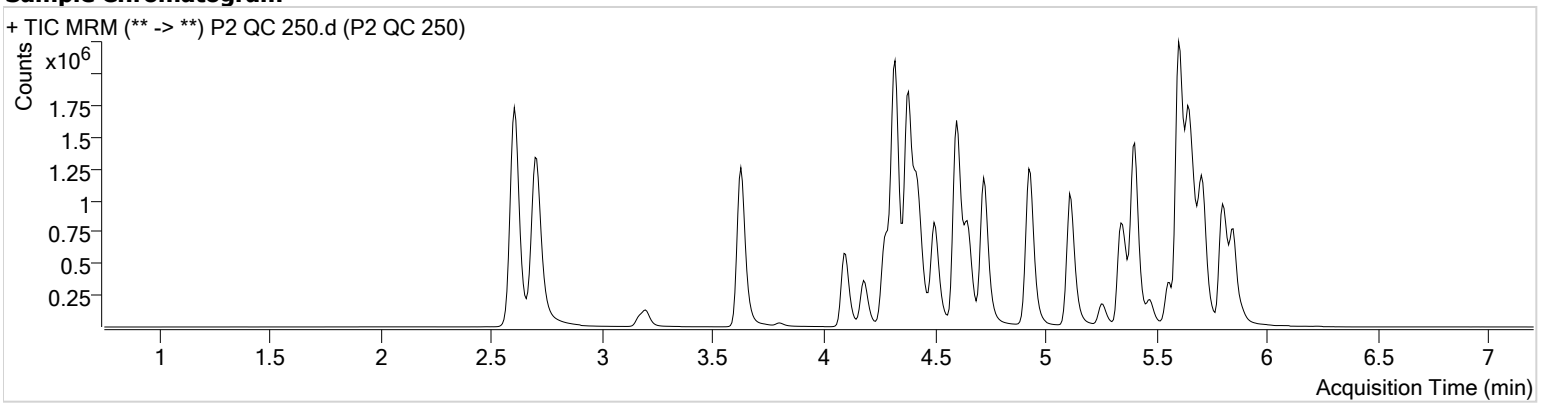
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Calibration Last Update 11/20/2020 8:51:19 AM

Instrument	Instrument 1	**Data File**	P2 QC 250.d
Type	QC	**Sample**	P2 QC 250
Acq. Method	AM 28 MDQ P2.m	**Operator**	Tamara Salazar
Sample Position	P6-C2	**Comment**	
Injection Volume	2		
Acq. Date-Time	11/19/2020 4:54:20 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Amitriptyline	5.671	518602	21581.46	46.4	726.07	36332	241.6476 ng/ml
Clonazolam	5.558	498182	∞	28.6	∞	18670	254.6711 ng/ml
Doxepin	5.363	426849	21696.27	42.6	17127.34	116480	247.5044 ng/ml
Etizolam	5.818	456633	7825.77	27.8	23631.63	275057	219.1113 ng/ml
$ Flunitrazepam	5.649	1028774	∞	32.6	∞	79133	258.9329 ng/ml
* ~~Flurazepam~~	~~5.339~~	~~1703584~~	~~∞~~	~~12.6~~	~~∞~~	~~79133~~	~~189.3319 ng/ml~~ SJ
Levetiracetam	2.694	494988	∞	174.6	90828.46	771737	272.1158 ng/ml
Maprotiline	5.671	518602	21581.46	19.5	890.57	36332	230.6069 ng/ml
Methocarbamol	4.425	469118	13031.32	77.3	5786.43	771737	260.6749 ng/ml
Midazolam	5.805	168670	2741.97	91.4	1895.53	71913	248.5337 ng/ml
Nortriptyline	5.693	167193	23130.72	26.3	1371.29	20649	238.4392 ng/ml
Pseudoephedrine	2.608	4026836	1784.85	13.2	1820.18	771737	246.3172 ng/ml

*Outside curve range.

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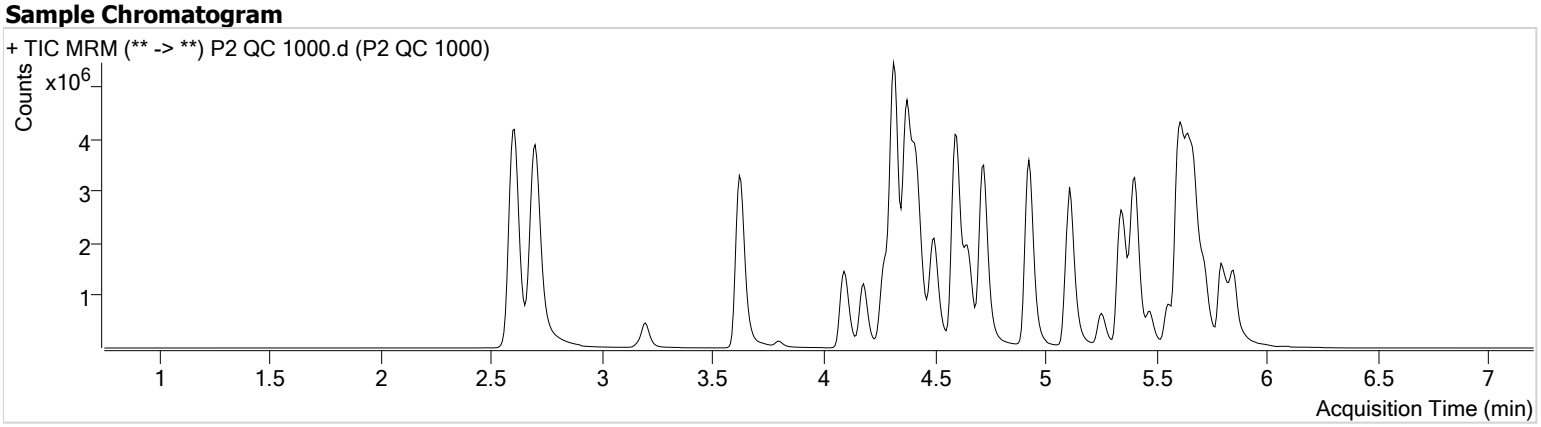
AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Calibration Last Update 11/20/2020 8:51:19 AM

Instrument	Instrument 1	**Data File**	P2 QC 1000.d
Type	QC	**Sample**	P2 QC 1000
Acq. Method	AM 28 MDQ P2.m	**Operator**	Tamara Salazar
Sample Position	P6-D2	**Comment**	
Injection Volume	2		
Acq. Date-Time	11/19/2020 5:15:31 PM		
Sample Info.			

Sample Chromatogram



	Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
§	Amitriptyline	5.671	2088512	45537.23	48.9	5424.13	40275	878.8872 ng/ml	
*	~~Clonazolam~~	~~5.558~~	~~1160085~~	~~∞~~	~~29.7~~	~~∞~~	~~13989~~	~~794.3853 ng/ml~~	SJ
§	Doxepin	5.363	1609461	183595.61	46.7	9195.95	111826	973.4305 ng/ml	
*	~~Etizolam~~	~~5.818~~	~~935436~~	~~2412.45~~	~~27.6~~	~~5232.21~~	~~114385~~	~~1076.7603 ng/ml~~	SJ
§	Flunitrazepam	5.649	1602488	∞	35.0	∞	35097	913.5610 ng/ml	
§ *	~~Flurazepam~~	~~5.339~~	~~5819509~~	~~∞~~	~~13.2~~	~~120880.54~~	~~35097~~	~~1442.4881 ng/ml~~	SJ
§ *	~~Levetiracetam~~	~~2.694~~	~~1121660~~	~~5043.78~~	~~171.9~~	~~10077.41~~	~~602660~~	~~792.1986 ng/ml~~	SJ
§ *	~~Maprotiline~~	~~5.671~~	~~2088512~~	~~45537.23~~	~~12.3~~ **~~Low~~**	~~1829.15~~	~~40275~~	~~837.8520 ng/ml~~	SJ
§ *	~~Methocarbamol~~	~~4.432~~	~~840141~~	~~41688.55~~	~~79.9~~	~~∞~~	~~602660~~	~~600.4228 ng/ml~~	SJ
	Midazolam	5.805	411382	1190.72	92.4	2087.80	48367	900.8271 ng/ml	
	Nortriptyline	5.693	526321	∞	27.3	34904.51	15669	989.1422 ng/ml	
	Pseudoephedrine	2.608	12000717	∞	13.3	∞	602660	940.5859 ng/ml	

*Outside curve range.

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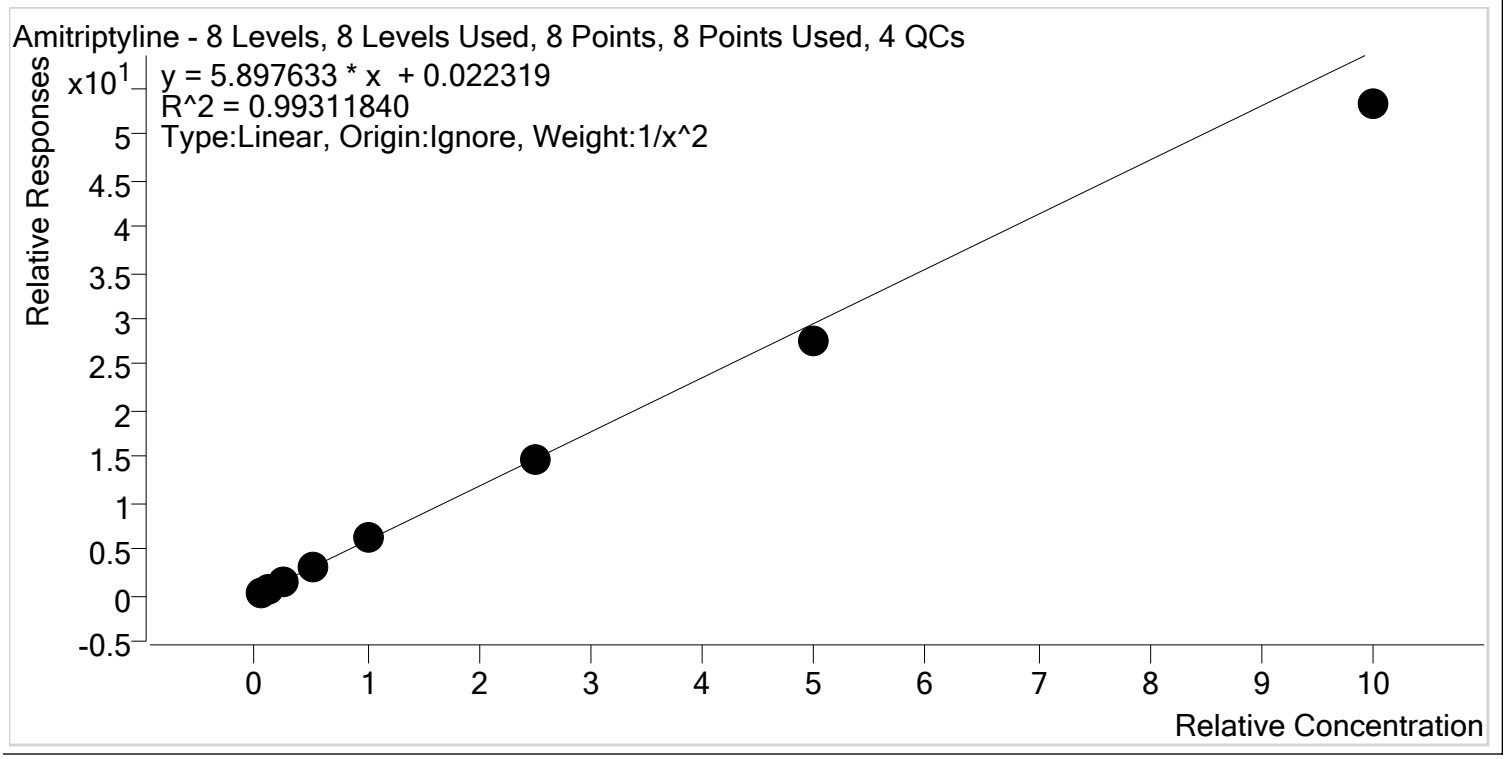
AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Last Cal. Update	11/20/2020 8:51 AM
Analyst Name	ISP\datastor
Analyte	Amitriptyline
Internal Standard	Amitriptyline-D3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
P2 Cal 1-5ng	1	✔	5.0	4.7	93.4
P2 Cal 2- 10ng	2	✔	10.0	11.0	110.4
P2 Cal 3 -25ng	3	✔	25.0	26.0	103.9
P2 Cal 4-50ng	4	✔	50.0	52.6	105.2
P2 Cal 5-100ng	5	✔	100.0	105.4	105.4
P2 Cal 6-250ng	6	✔	250.0	245.8	98.3
P2 Cal 7-500ng	7	✔	500.0	465.8	93.2
P2 Cal 8-1000ng	8	✔	1000.0	903.0	90.3

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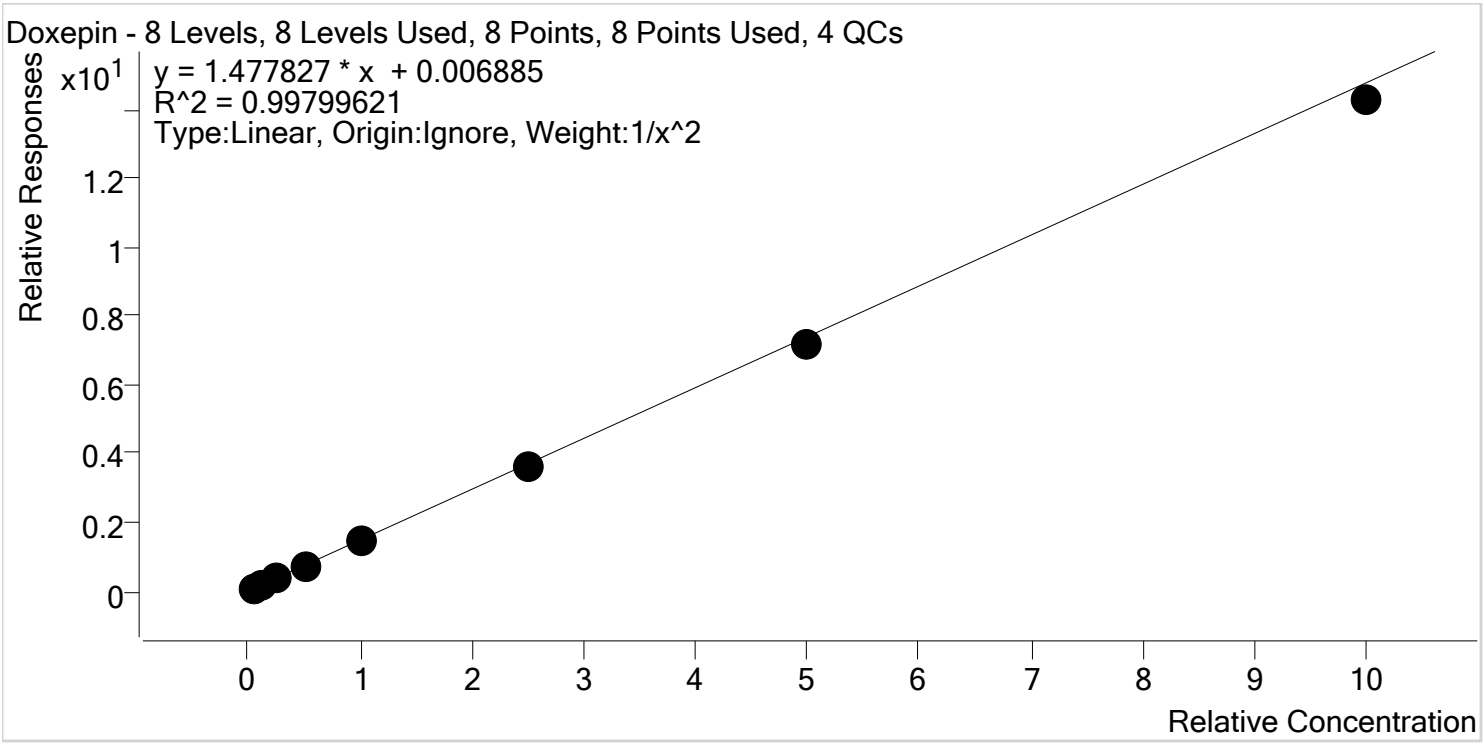
AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Last Cal. Update	11/20/2020 8:51 AM
Analyst Name	ISP\datastor
Analyte	Doxepin
Internal Standard	Doxepin-D3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
P2 Cal 1-5ng	1	✔	5.0	4.8	95.8
P2 Cal 2- 10ng	2	✔	10.0	10.7	106.7
P2 Cal 3 -25ng	3	✔	25.0	25.9	103.6
P2 Cal 4-50ng	4	✔	50.0	50.9	101.8
P2 Cal 5-100ng	5	✔	100.0	100.8	100.8
P2 Cal 6-250ng	6	✔	250.0	244.8	97.9
P2 Cal 7-500ng	7	✔	500.0	484.3	96.9
P2 Cal 8-1000ng	8	✔	1000.0	965.6	96.6

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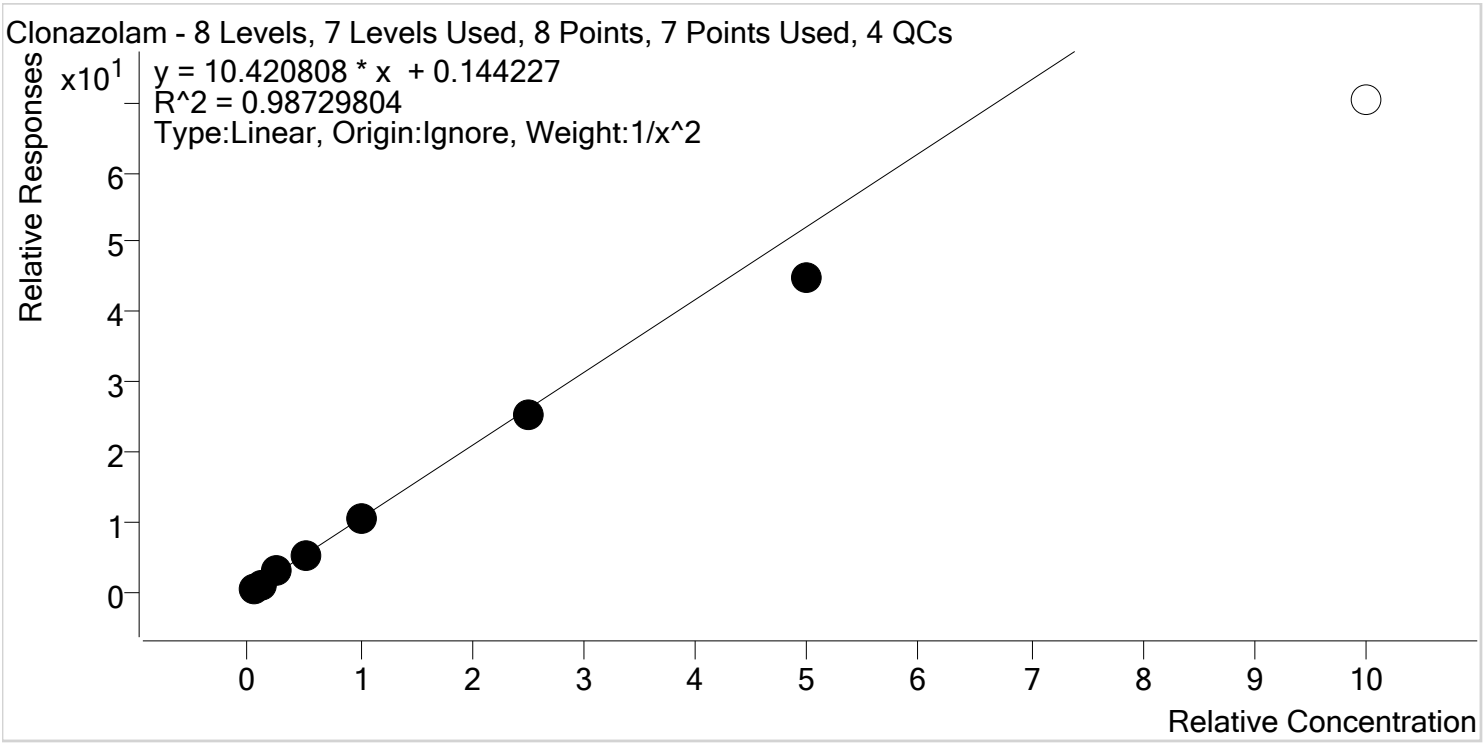
AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Last Cal. Update	11/20/2020 8:51 AM
Analyst Name	ISP\datastor
Analyte	Clonazolam
Internal Standard	Phenazepam-D4



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
P2 Cal 1-5ng	1	✔	5.0	4.6	91.5
P2 Cal 2- 10ng	2	✔	10.0	11.3	113.0
P2 Cal 3 -25ng	3	✔	25.0	27.4	109.7
P2 Cal 4-50ng	4	✔	50.0	50.9	101.8
P2 Cal 5-100ng	5	✔	100.0	101.5	101.5
P2 Cal 6-250ng	6	✔	250.0	241.7	96.7
P2 Cal 7-500ng	7	✔	500.0	429.0	85.8
P2 Cal 8-1000ng	8	✗	1000.0	672.5	67.3

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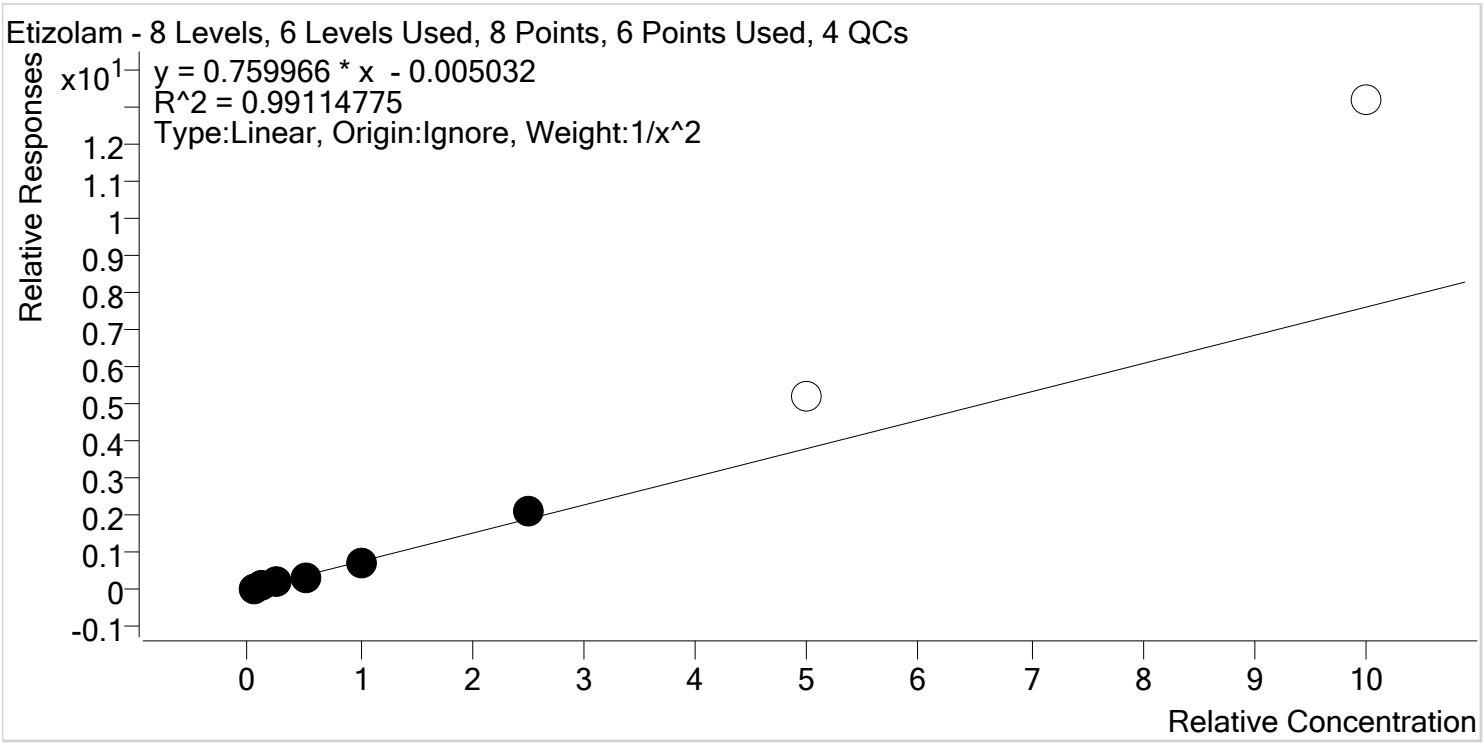
AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Last Cal. Update	11/20/2020 8:51 AM
Analyst Name	ISP\datastor
Analyte	Etizolam
Internal Standard	Estazolam-D5



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
P2 Cal 1-5ng	1	✔	5.0	5.1	102.1
P2 Cal 2- 10ng	2	✔	10.0	10.0	100.2
P2 Cal 3 -25ng	3	✔	25.0	22.6	90.5
P2 Cal 4-50ng	4	✔	50.0	47.4	94.8
P2 Cal 5-100ng	5	✔	100.0	99.2	99.2
P2 Cal 6-250ng	6	✔	250.0	283.0	113.2
P2 Cal 7-500ng	7	✗	500.0	690.1	138.0
P2 Cal 8-1000ng	8	✗	1000.0	1731.4	173.1

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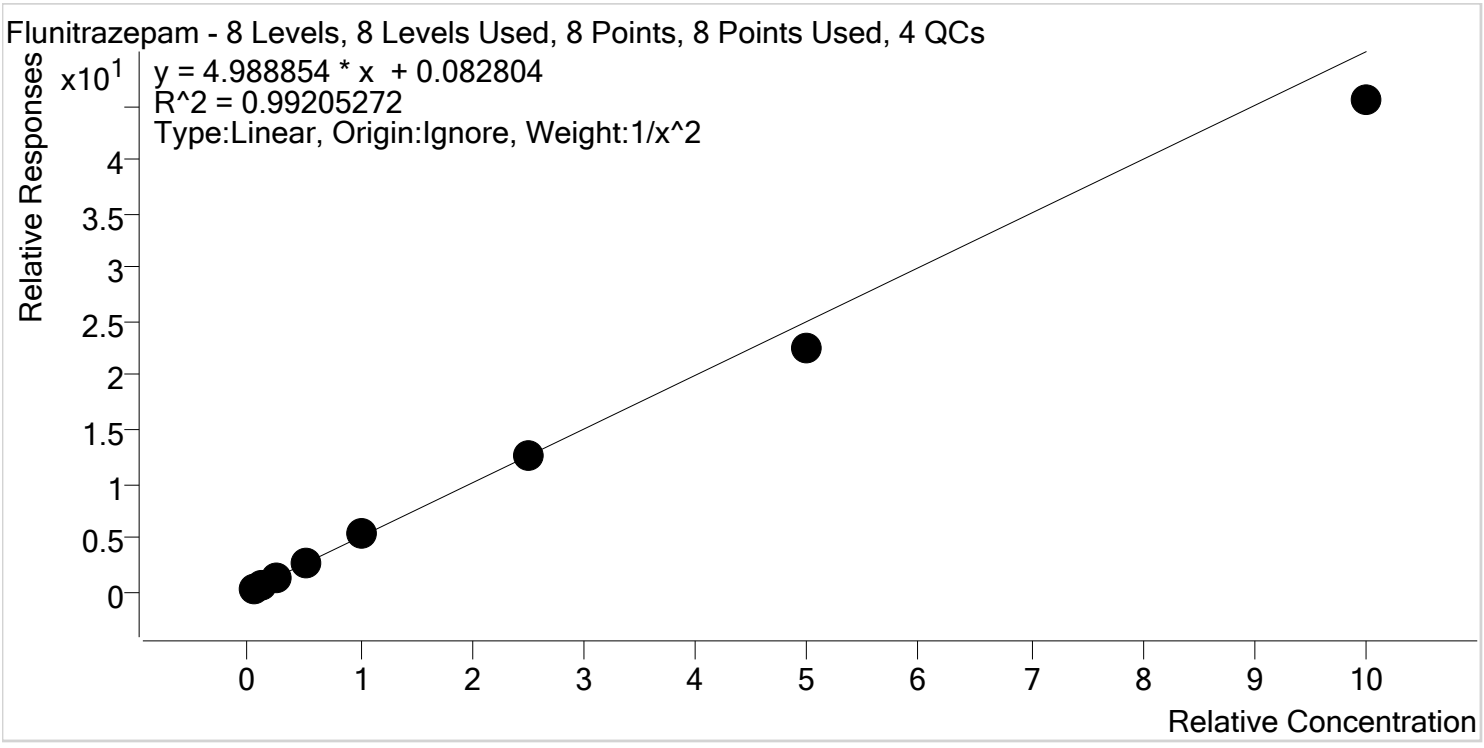
AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Last Cal. Update	11/20/2020 8:51 AM
Analyst Name	ISP\datastor
Analyte	Flunitrazepam
Internal Standard	Flunitrazepam-D7

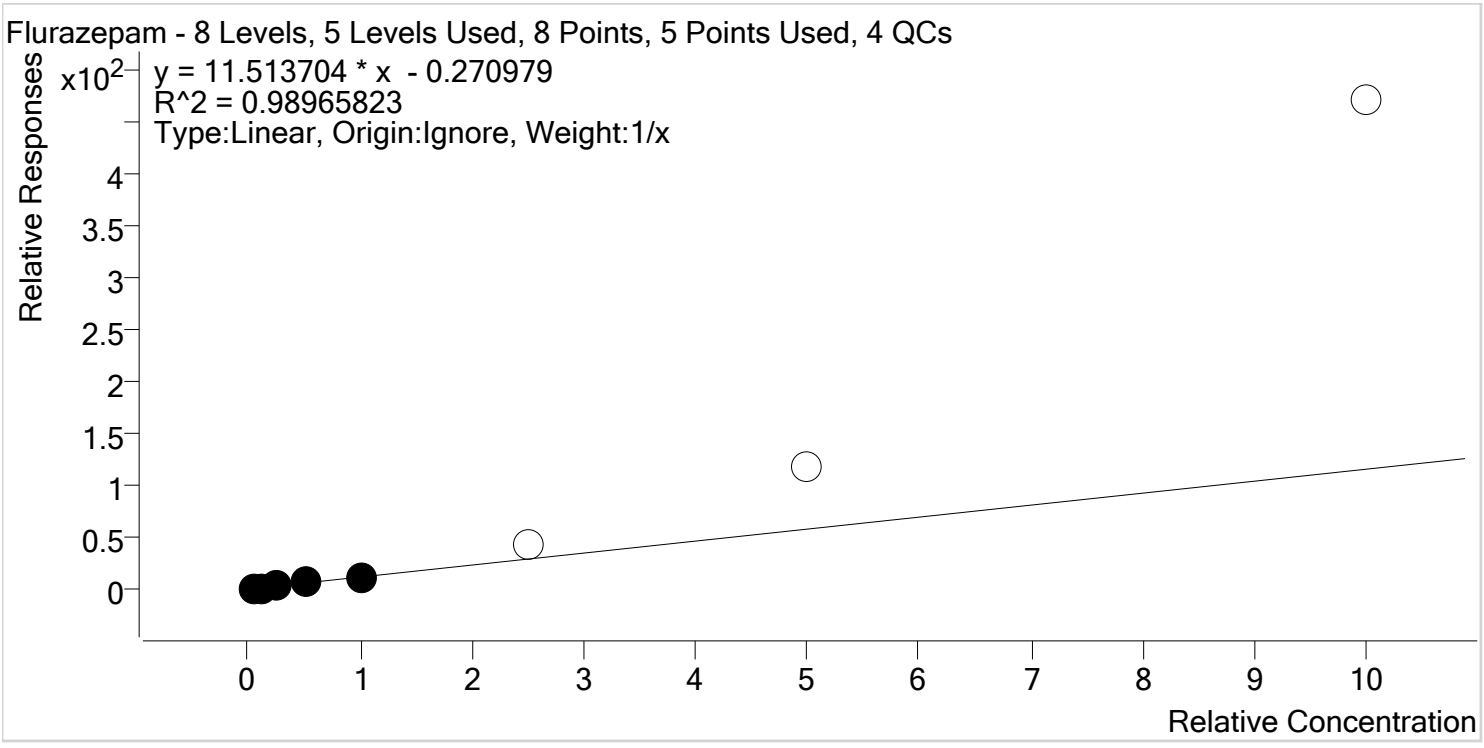


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
P2 Cal 1-5ng	1	✔	5.0	4.7	93.2
P2 Cal 2- 10ng	2	✔	10.0	11.0	109.8
P2 Cal 3 -25ng	3	✔	25.0	26.5	106.0
P2 Cal 4-50ng	4	✔	50.0	53.2	106.4
P2 Cal 5-100ng	5	✔	100.0	103.5	103.5
P2 Cal 6-250ng	6	✔	250.0	251.2	100.5
P2 Cal 7-500ng	7	✔	500.0	447.7	89.5
P2 Cal 8-1000ng	8	✔	1000.0	909.9	91.0

$ SJ TS

AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Last Cal. Update	11/20/2020 8:51 AM
Analyst Name	ISP\datastor
Analyte	Flurazepam
Internal Standard	Flunitrazepam-D7

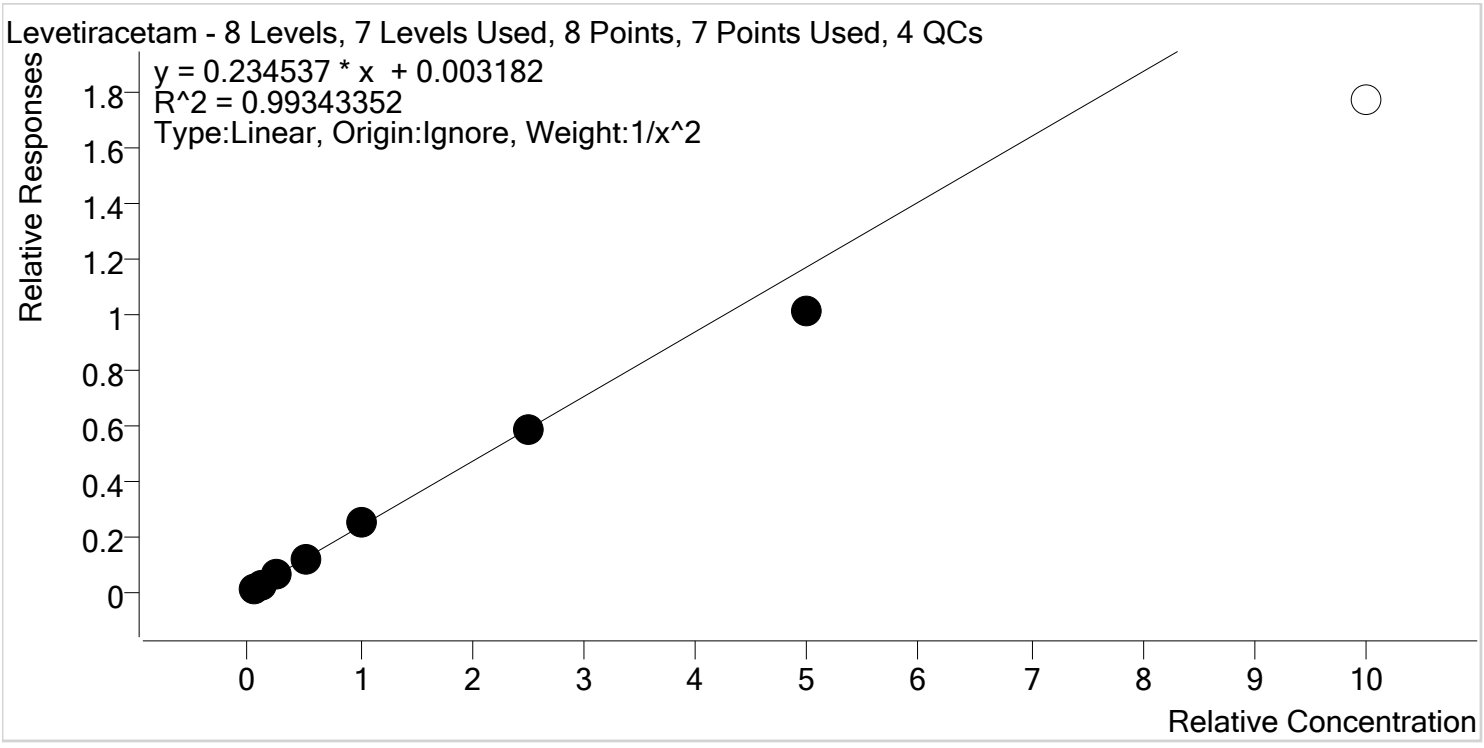


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
P2 Cal 1-5ng	1	✔	5.0	5.6	111.3
P2 Cal 2- 10ng	2	✔	10.0	10.5	105.1
P2 Cal 3 -25ng	3	✔	25.0	20.8	83.1
P2 Cal 4-50ng	4	✔	50.0	47.3	94.7
P2 Cal 5-100ng	5	✔	100.0	105.8	105.8
P2 Cal 6-250ng	6	✗	250.0	364.2	145.7
P2 Cal 7-500ng	7	✗	500.0	1013.7	202.7
P2 Cal 8-1000ng	8	✗	1000.0	4078.7	407.9

$ SJ TS

AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Last Cal. Update	11/20/2020 8:51 AM
Analyst Name	ISP\datastor
Analyte	Levetiracetam
Internal Standard	Pseudoephedrine-D3

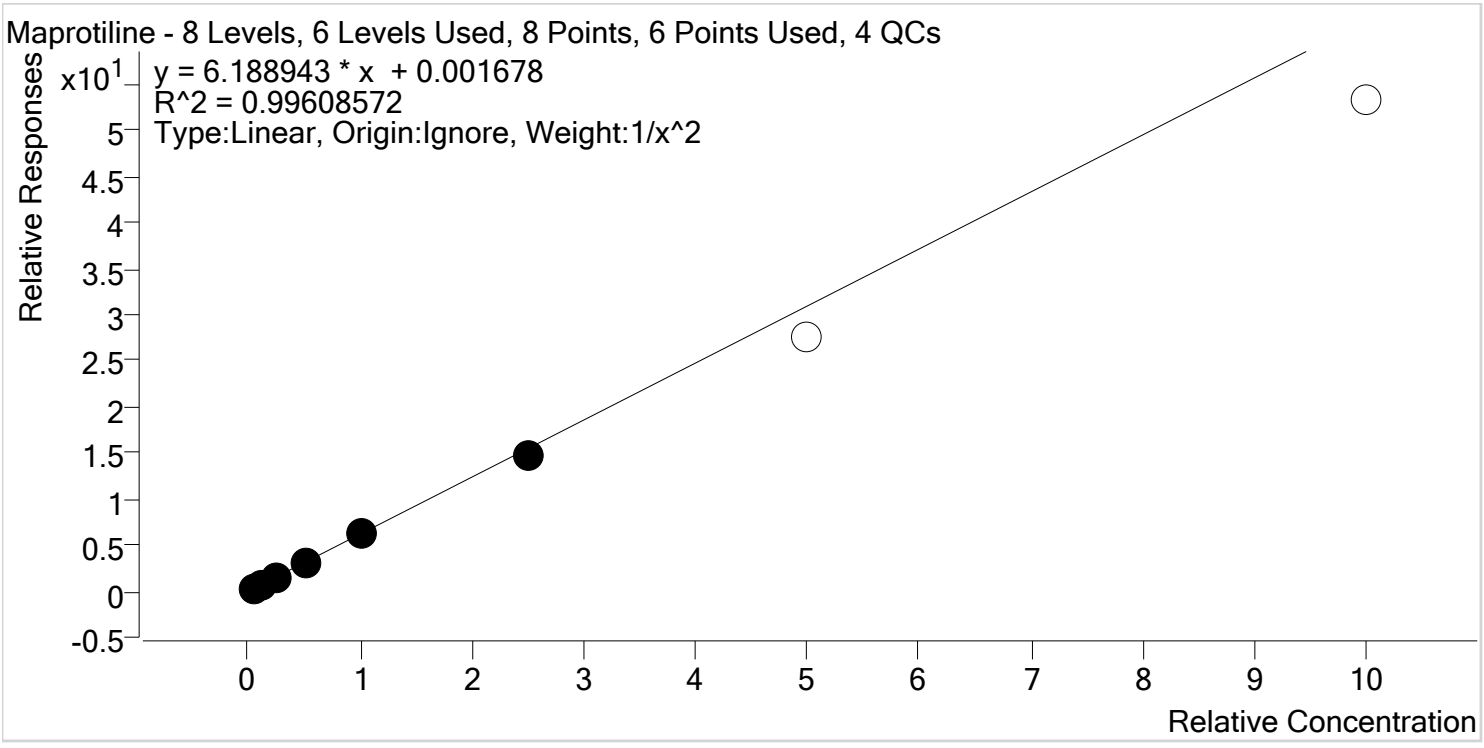


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
P2 Cal 1-5ng	1	✔	5.0	4.8	96.3
P2 Cal 2- 10ng	2	✔	10.0	10.4	104.1
P2 Cal 3 -25ng	3	✔	25.0	26.4	105.5
P2 Cal 4-50ng	4	✔	50.0	52.2	104.3
P2 Cal 5-100ng	5	✔	100.0	104.6	104.6
P2 Cal 6-250ng	6	✔	250.0	246.4	98.6
P2 Cal 7-500ng	7	✔	500.0	432.7	86.5
P2 Cal 8-1000ng	8	✗	1000.0	756.2	75.6

$ SJ TS

AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Last Cal. Update	11/20/2020 8:51 AM
Analyst Name	ISP\datastor
Analyte	Maprotiline
Internal Standard	Amitriptyline-D3

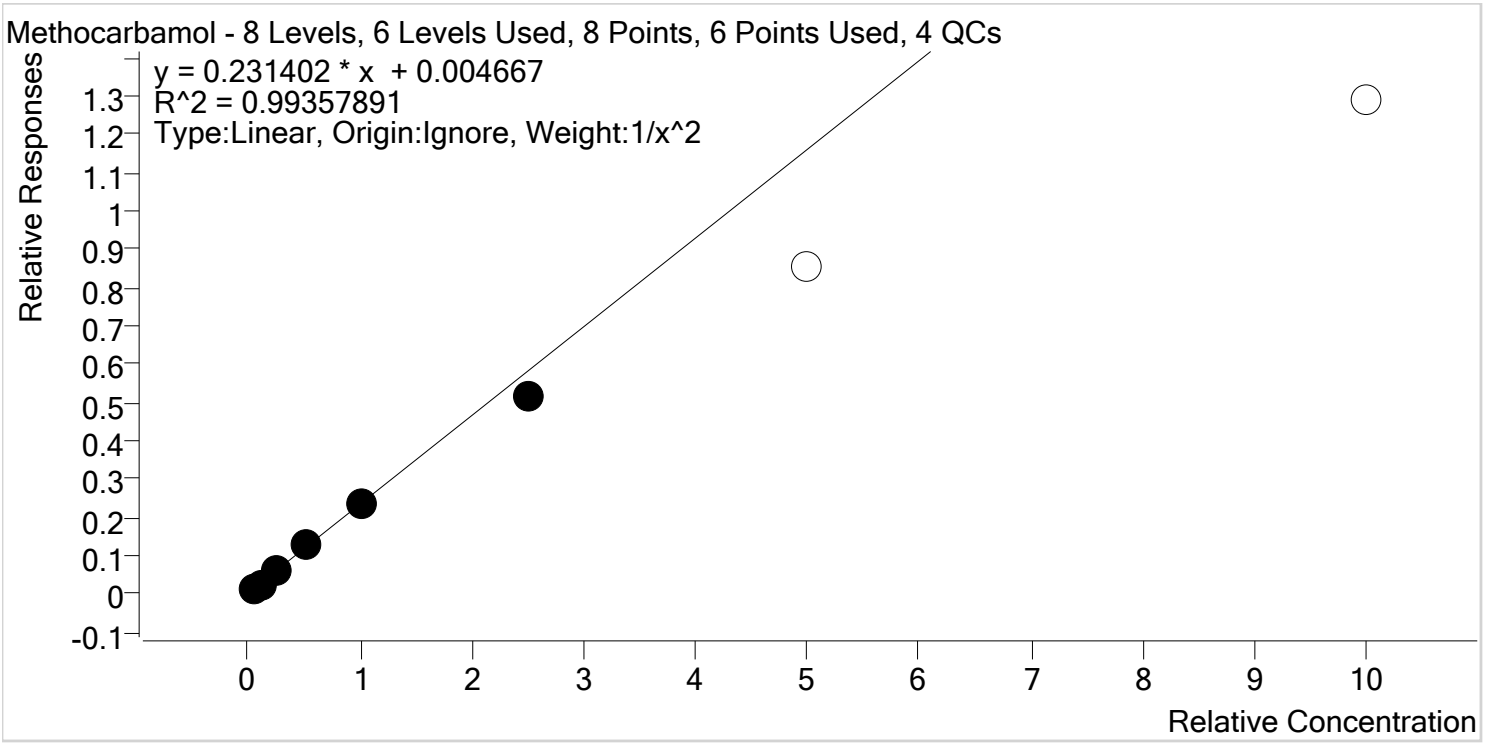


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
P2 Cal 1-5ng	1	✔	5.0	4.8	95.7
P2 Cal 2- 10ng	2	✔	10.0	10.8	108.5
P2 Cal 3 -25ng	3	✔	25.0	25.1	100.3
P2 Cal 4-50ng	4	✔	50.0	50.5	100.9
P2 Cal 5-100ng	5	✔	100.0	100.7	100.7
P2 Cal 6-250ng	6	✔	250.0	234.6	93.8
P2 Cal 7-500ng	7	✗	500.0	444.2	88.8
P2 Cal 8-1000ng	8	✗	1000.0	860.8	86.1

$ SJ TS

AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Last Cal. Update	11/20/2020 8:51 AM
Analyst Name	ISP\datastor
Analyte	Methocarbamol
Internal Standard	Pseudoephedrine-D3

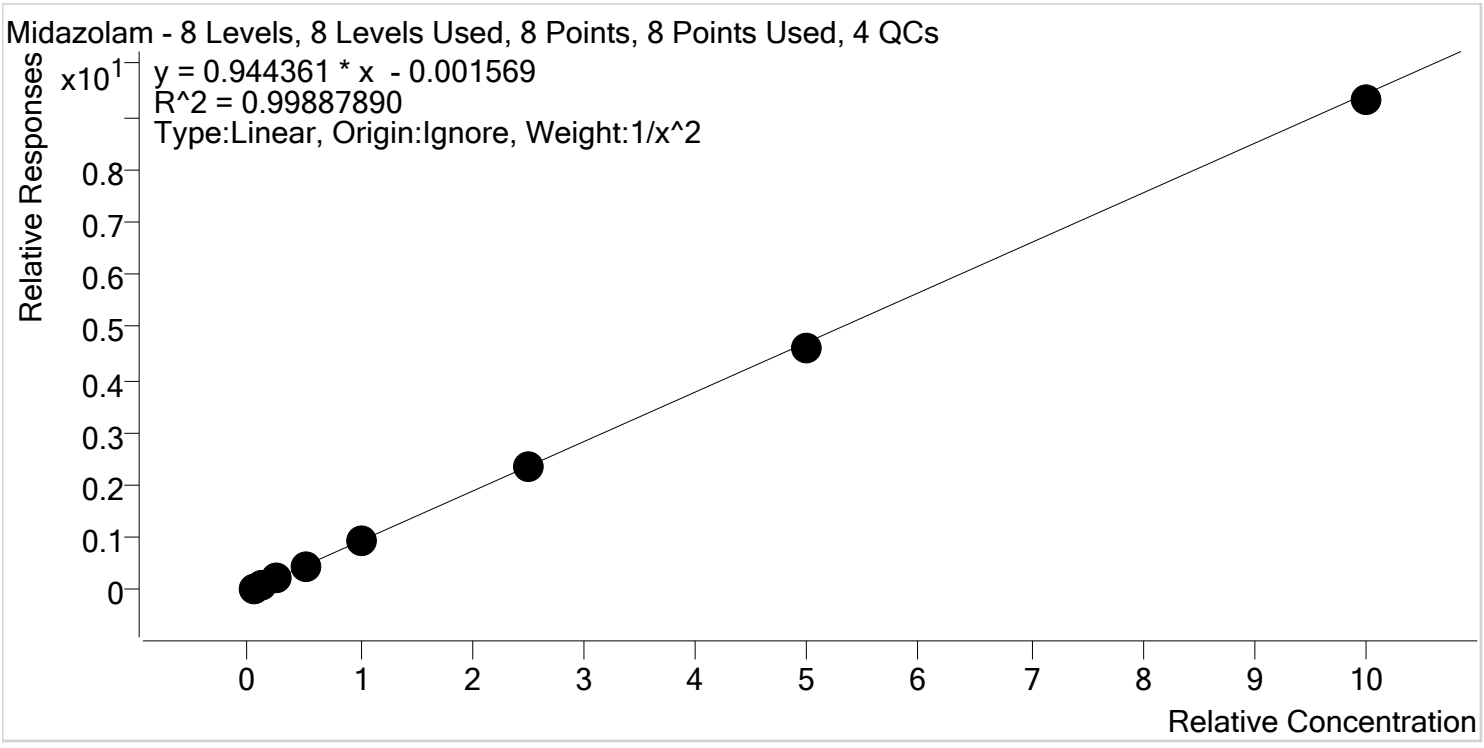


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
P2 Cal 1-5ng	1	✔	5.0	4.9	97.6
P2 Cal 2- 10ng	2	✔	10.0	10.2	102.0
P2 Cal 3 -25ng	3	✔	25.0	26.2	104.7
P2 Cal 4-50ng	4	✔	50.0	52.9	105.8
P2 Cal 5-100ng	5	✔	100.0	102.0	102.0
P2 Cal 6-250ng	6	✔	250.0	219.9	87.9
P2 Cal 7-500ng	7	✗	500.0	368.9	73.8
P2 Cal 8-1000ng	8	✗	1000.0	555.4	55.5

$ SJ TS

AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Last Cal. Update	11/20/2020 8:51 AM
Analyst Name	ISP\datastor
Analyte	Midazolam
Internal Standard	Midazolam-D4

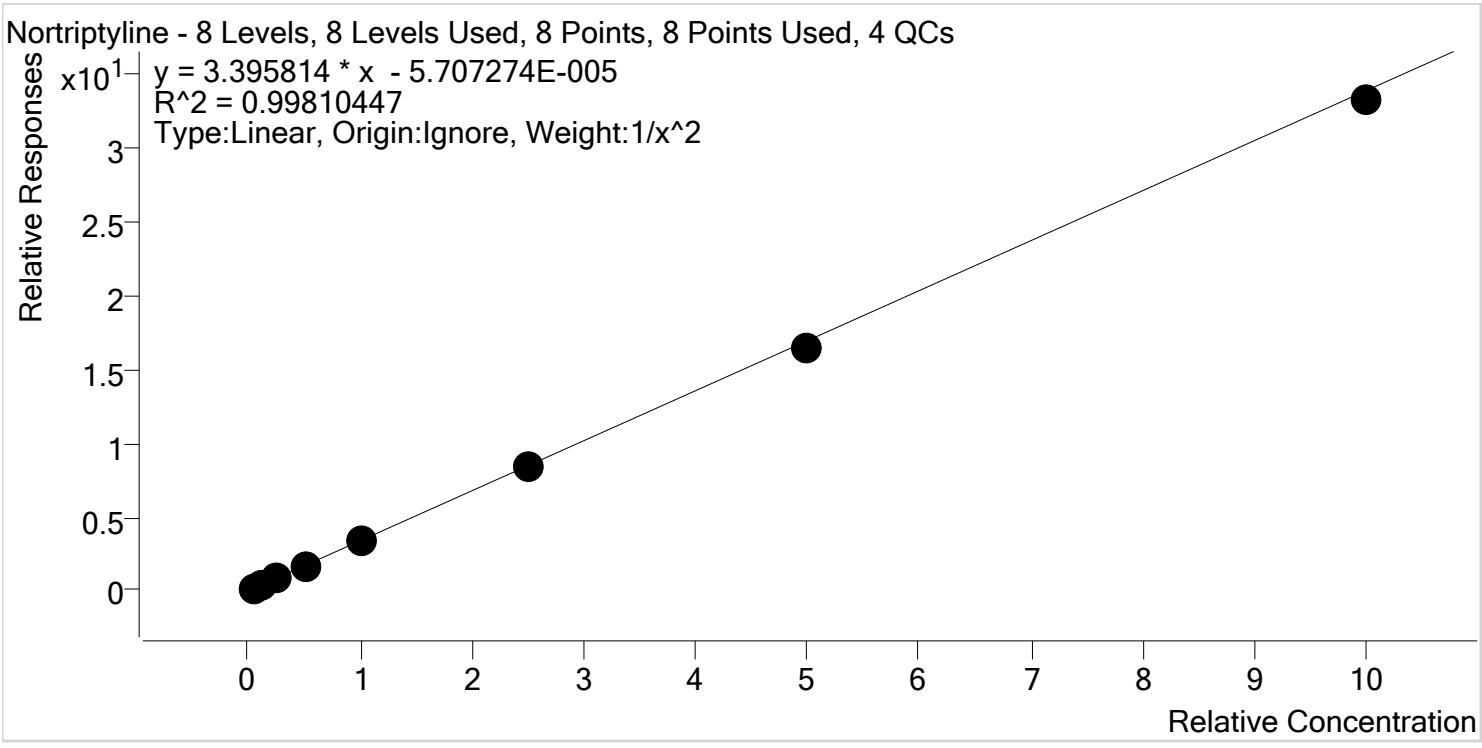


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
P2 Cal 1-5ng	1	✔	5.0	4.9	97.0
P2 Cal 2- 10ng	2	✔	10.0	10.5	105.5
P2 Cal 3 -25ng	3	✔	25.0	25.4	101.4
P2 Cal 4-50ng	4	✔	50.0	49.5	99.1
P2 Cal 5-100ng	5	✔	100.0	102.5	102.5
P2 Cal 6-250ng	6	✔	250.0	246.1	98.4
P2 Cal 7-500ng	7	✔	500.0	486.8	97.4
P2 Cal 8-1000ng	8	✔	1000.0	986.7	98.7

$ SJ TS

AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Last Cal. Update	11/20/2020 8:51 AM
Analyst Name	ISP\datastor
Analyte	Nortriptyline
Internal Standard	Nortriptyline-d3

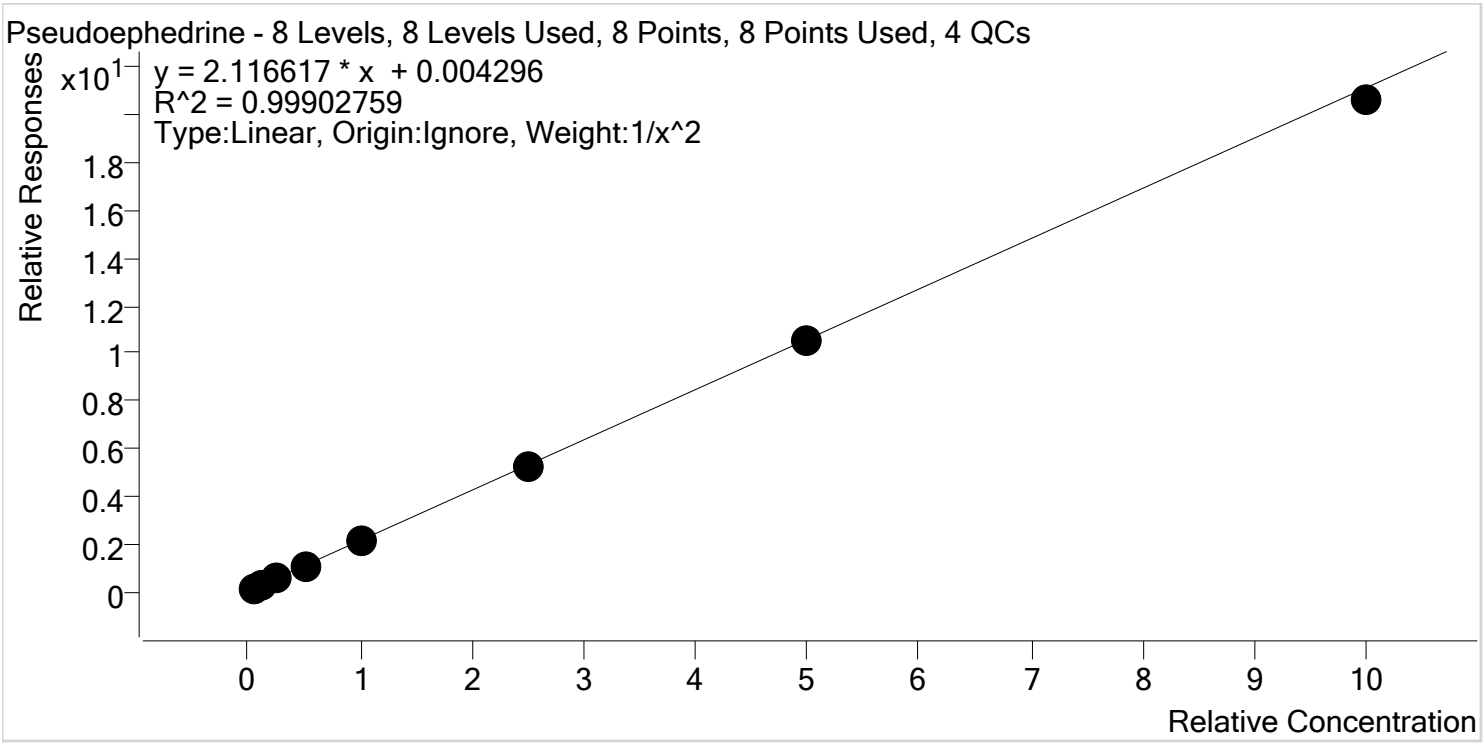


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
P2 Cal 1-5ng	1	✔	5.0	4.8	95.8
P2 Cal 2- 10ng	2	✔	10.0	10.8	107.8
P2 Cal 3 -25ng	3	✔	25.0	25.3	101.2
P2 Cal 4-50ng	4	✔	50.0	50.4	100.9
P2 Cal 5-100ng	5	✔	100.0	101.2	101.2
P2 Cal 6-250ng	6	✔	250.0	246.6	98.6
P2 Cal 7-500ng	7	✔	500.0	482.2	96.4
P2 Cal 8-1000ng	8	✔	1000.0	980.8	98.1

$ SJ TS

AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Last Cal. Update	11/20/2020 8:51 AM
Analyst Name	ISP\datastor
Analyte	Pseudoephedrine
Internal Standard	Pseudoephedrine-D3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
P2 Cal 1-5ng	1	✔	5.0	4.9	97.0
P2 Cal 2- 10ng	2	✔	10.0	10.6	105.8
P2 Cal 3 -25ng	3	✔	25.0	25.1	100.3
P2 Cal 4-50ng	4	✔	50.0	50.2	100.4
P2 Cal 5-100ng	5	✔	100.0	100.9	100.9
P2 Cal 6-250ng	6	✔	250.0	247.6	99.0
P2 Cal 7-500ng	7	✔	500.0	495.7	99.1
P2 Cal 8-1000ng	8	✔	1000.0	975.1	97.5

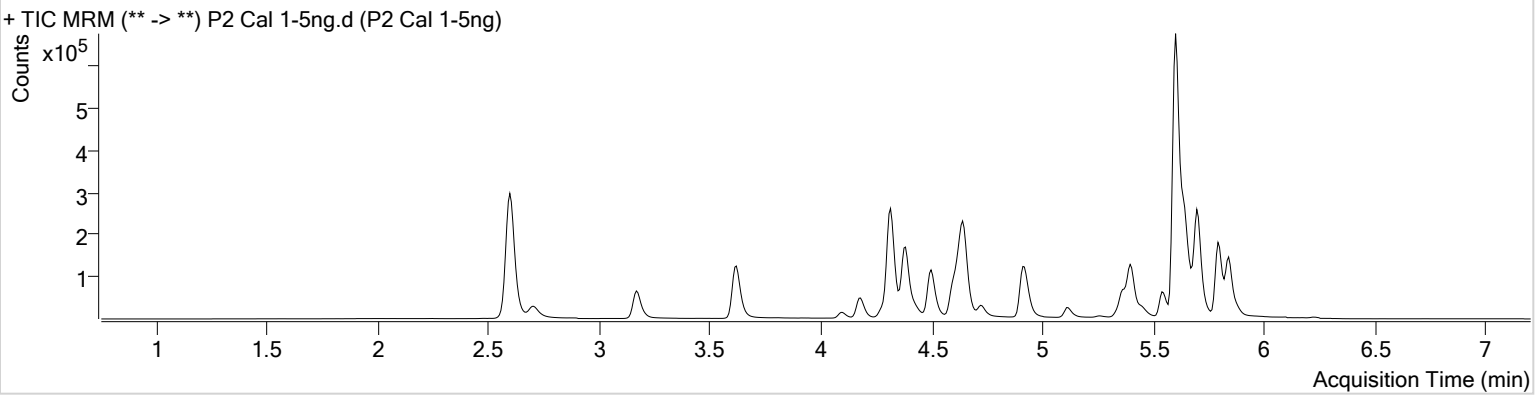
$ SJ TS

AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Calibration Last Update 11/20/2020 8:51:19 AM

Instrument	Instrument 1	**Data File**	P2 Cal 1-5ng.d
Type	Cal	**Sample**	P2 Cal 1-5ng
Acq. Method	AM 28 MDQ P2.m	**Operator**	Tamara Salazar
Sample Position	P6-A1	**Comment**	
Injection Volume	2		
Acq. Date-Time	11/19/2020 2:26:06 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Amitriptyline	5.671	16075	386.29	41.7	177.53	53986	4.6704 ng/ml
Clonazolam	5.558	12622	∞	25.9	∞	20321	4.5766 ng/ml
Doxepin	5.370	11846	124.97	42.2	∞	152529	4.7892 ng/ml
Etizolam	5.811	13928	25280.25	27.6	∞	412449	5.1058 ng/ml
Flunitrazepam	5.649	30213	3398.14	29.9	∞	95803	4.6617 ng/ml
Flurazepam	5.339	35410	29822.12	13.7	∞	95803	5.5637 ng/ml
Levetiracetam	2.701	11473	454.25	187.7	461.46	792337	4.8172 ng/ml
Maprotiline	5.671	16075	386.29	20.7	65.03	53986	4.7840 ng/ml
Methocarbamol	4.425	12646	685.11	72.9	477.85	792337	4.8806 ng/ml
Midazolam	5.805	4232	∞	87.7	∞	95660	4.8506 ng/ml
Nortriptyline	5.700	5954	8306.29	29.4	47.31	36618	4.7897 ng/ml
Pseudoephedrine	2.608	84749	∞	13.2	1236.73	792337	4.8504 ng/ml

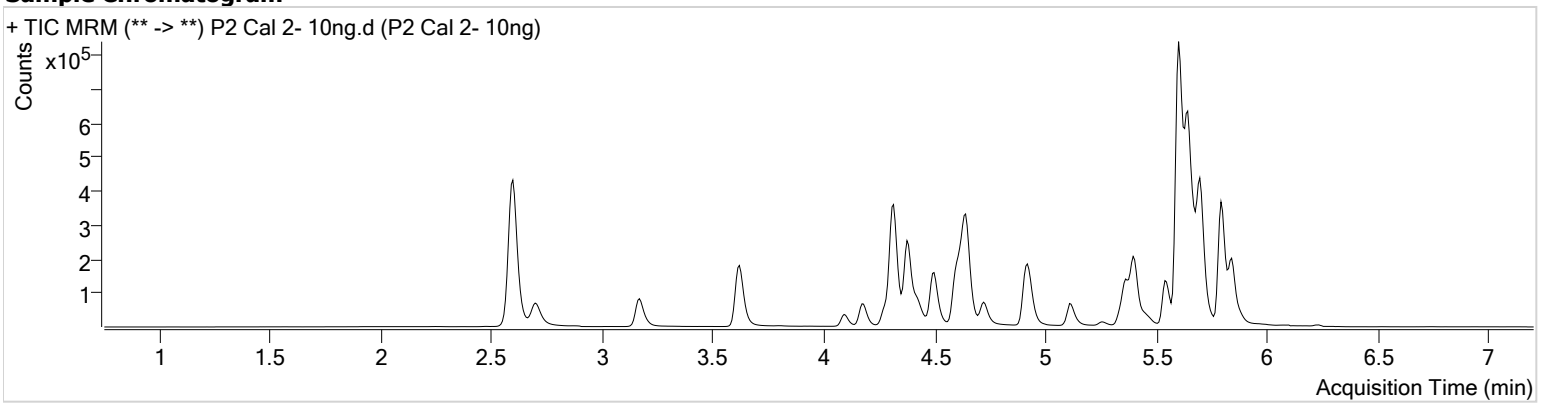
$ SJ TS

AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Calibration Last Update 11/20/2020 8:51:19 AM

Instrument	Instrument 1	**Data File**	P2 Cal 2- 10ng.d
Type	Cal	**Sample**	P2 Cal 2- 10ng
Acq. Method	AM 28 MDQ P2.m	**Operator**	Tamara Salazar
Sample Position	P6-B1	**Comment**	
Injection Volume	2		
Acq. Date-Time	11/19/2020 2:36:50 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Amitriptyline	5.671	104808	1455.06	39.7	700.79	155700	11.0352 ng/ml
Clonazolam	5.558	29876	560.05	26.3	∞	22609	11.2964 ng/ml
Doxepin	5.363	46538	1831.90	40.9	828.78	282682	10.6742 ng/ml
Etizolam	5.811	33192	37378.63	27.3	14517.63	466931	10.0160 ng/ml
Flunitrazepam	5.649	66037	1084.32	30.6	∞	104762	10.9754 ng/ml
Flurazepam	5.339	98394	∞	12.4	214.49	104762	10.5109 ng/ml
Levetiracetam	2.694	28612	1084.68	182.3	1917.83	1036586	10.4123 ng/ml
Maprotiline	5.671	104808	1455.06	26.4	366.97	155700	10.8493 ng/ml
Methocarbamol	4.425	29310	∞	73.8	512.86	1036586	10.2027 ng/ml
Midazolam	5.805	11186	∞	87.7	∞	114114	10.5461 ng/ml
Nortriptyline	5.693	50770	24215.28	26.4	953.65	138728	10.7787 ng/ml
Pseudoephedrine	2.608	236563	12307.38	13.1	1839.72	1036586	10.5790 ng/ml

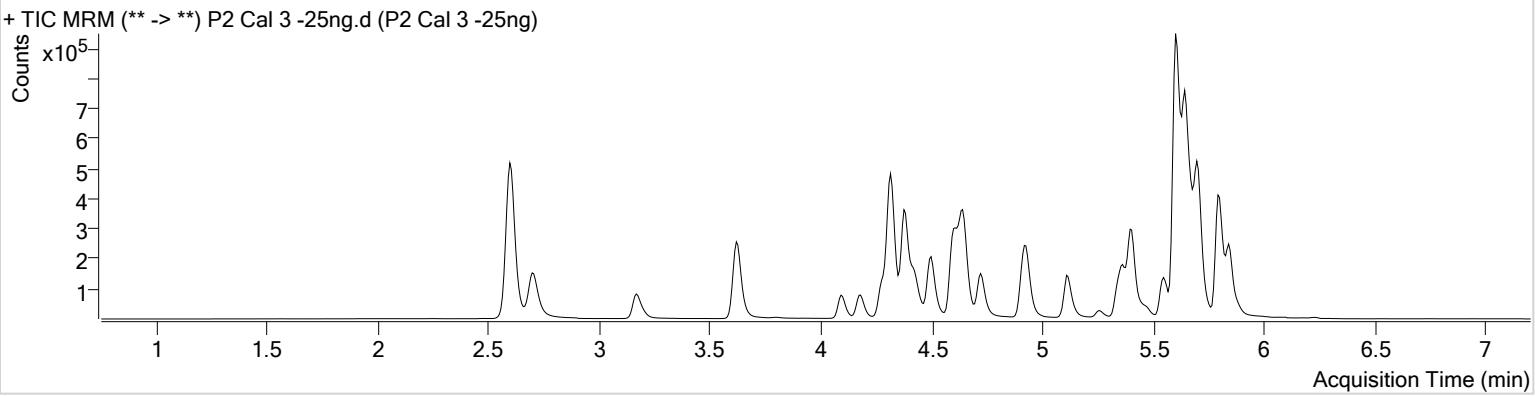
$ SJ TS

AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Calibration Last Update 11/20/2020 8:51:19 AM

Instrument	Instrument 1	**Data File**	P2 Cal 3 -25ng.d
Type	Cal	**Sample**	P2 Cal 3 -25ng
Acq. Method	AM 28 MDQ P2.m	**Operator**	Tamara Salazar
Sample Position	P6-C1	**Comment**	
Injection Volume	2		
Acq. Date-Time	11/19/2020 2:47:24 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Amitriptyline	5.671	189181	783.72	41.3	359.30	121731	25.9725 ng/ml
Clonazolam	5.558	66095	∞	26.4	∞	22018	27.4223 ng/ml
Doxepin	5.363	96367	2128.47	39.3	1113.60	247340	25.8981 ng/ml
Etizolam	5.811	72152	5027.26	27.0	∞	432357	22.6211 ng/ml
Flunitrazepam	5.649	147631	2333.29	30.7	∞	105047	26.5105 ng/ml
Flurazepam	5.339	222947	∞	12.4	∞	105047	20.7868 ng/ml
Levetiracetam	2.694	63647	2237.67	182.0	4488.41	978865	26.3665 ng/ml
Maprotiline	5.671	189181	783.72	26.4	∞	121731	25.0835 ng/ml
Methocarbamol	4.425	63864	∞	76.6	1615.79	978865	26.1781 ng/ml
Midazolam	5.805	25058	∞	84.7	∞	105329	25.3583 ng/ml
Nortriptyline	5.693	90147	∞	26.0	1044.44	104947	25.2969 ng/ml
Pseudoephedrine	2.608	523594	∞	13.1	1457.60	978865	25.0685 ng/ml

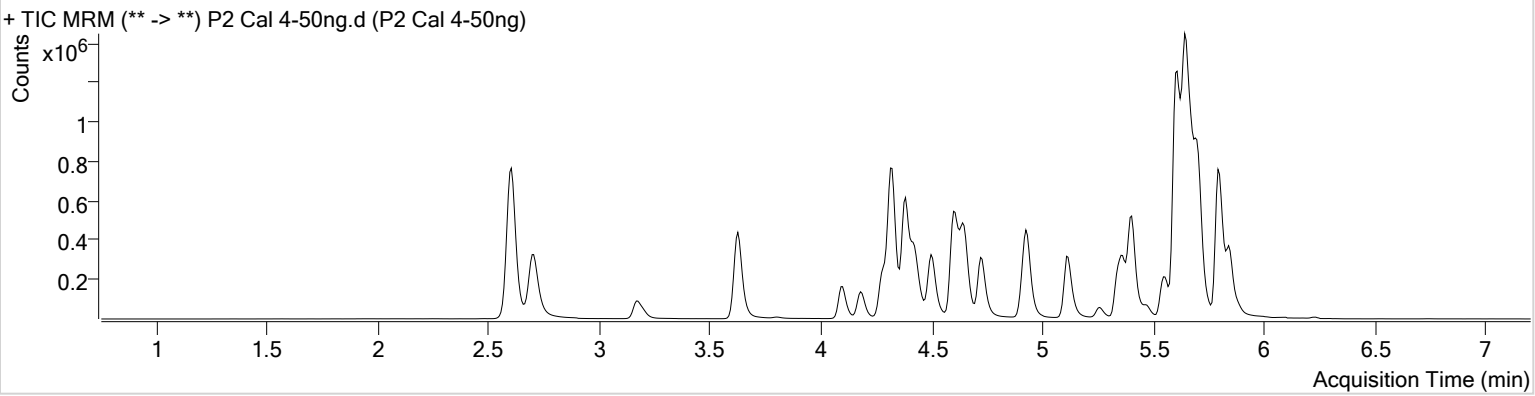
$ SJ TS

AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Calibration Last Update 11/20/2020 8:51:19 AM

Instrument	Instrument 1	**Data File**	P2 Cal 4-50ng.d
Type	Cal	**Sample**	P2 Cal 4-50ng
Acq. Method	AM 28 MDQ P2.m	**Operator**	Tamara Salazar
Sample Position	P6-D1	**Comment**	
Injection Volume	2		
Acq. Date-Time	11/19/2020 2:57:59 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Amitriptyline	5.671	555521	9134.97	42.8	1936.45	177785	52.6034 ng/ml
Clonazolam	5.558	131594	∞	29.1	∞	24152	50.9018 ng/ml
Doxepin	5.370	232860	2049.47	41.5	927.34	306829	50.8884 ng/ml
Etizolam	5.811	143779	20786.16	28.4	∞	404703	47.4103 ng/ml
Flunitrazepam	5.649	261012	3809.10	32.4	1483.06	95325	53.2249 ng/ml
Flurazepam	5.339	493651	35105.83	12.2	201242.72	95325	47.3313 ng/ml
Levetiracetam	2.701	133707	11926.95	179.6	4763.58	1065166	52.1645 ng/ml
Maprotiline	5.671	555521	9134.97	27.0	2125.34	177785	50.4609 ng/ml
Methocarbamol	4.425	135298	4262.62	77.2	∞	1065166	52.8751 ng/ml
Midazolam	5.805	49813	848.66	88.3	9197.25	106834	49.5397 ng/ml
Nortriptyline	5.693	281008	160024.12	26.7	8772.15	164059	50.4417 ng/ml
Pseudoephedrine	2.608	1136186	11522.86	13.2	922.95	1065166	50.1923 ng/ml

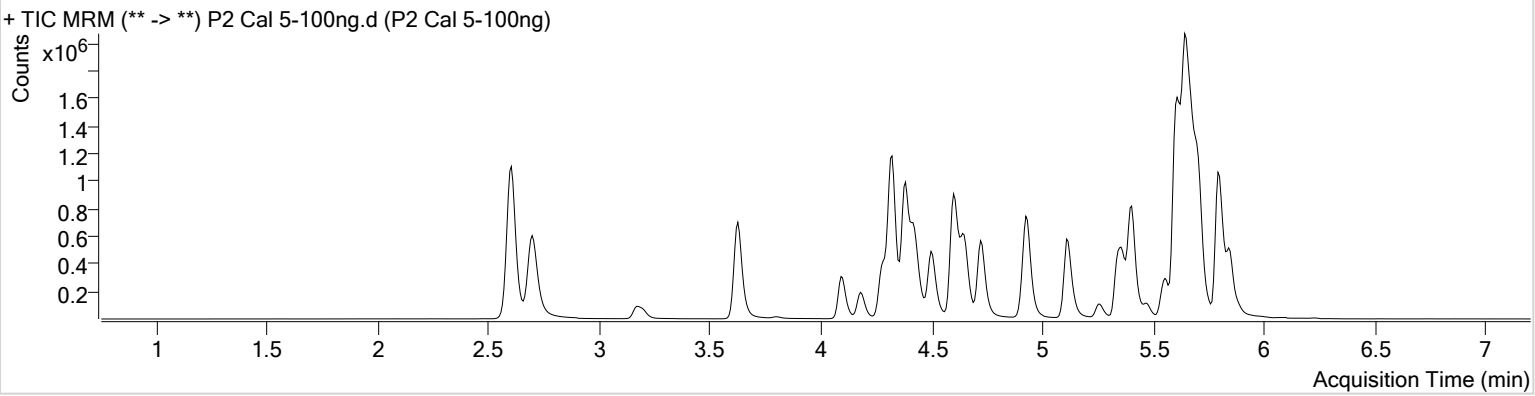
$ SJ TS

AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Calibration Last Update 11/20/2020 8:51:19 AM

Instrument	Instrument 1	**Data File**	P2 Cal 5-100ng.d
Type	Cal	**Sample**	P2 Cal 5-100ng
Acq. Method	AM 28 MDQ P2.m	**Operator**	Tamara Salazar
Sample Position	P6-E1	**Comment**	
Injection Volume	2		
Acq. Date-Time	11/19/2020 3:08:32 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Amitriptyline	5.671	986705	13957.55	42.9	1840.59	158223	105.3614 ng/ml
Clonazolam	5.558	233393	16128.72	28.2	∞	21765	101.5203 ng/ml
Doxepin	5.370	422967	24178.95	42.0	936.18	282740	100.7609 ng/ml
Etizolam	5.818	245784	15665.88	27.9	∞	328083	99.2392 ng/ml
Flunitrazepam	5.649	407497	15813.05	32.9	∞	77655	103.5248 ng/ml
Flurazepam	5.339	924981	115134.50	12.3	160909.23	77655	105.8074 ng/ml
Levetiracetam	2.694	243074	5714.64	177.6	9034.70	977965	104.6183 ng/ml
Maprotiline	5.671	986705	13957.55	24.8	1869.72	158223	100.7356 ng/ml
Methocarbamol	4.425	235294	4007.83	77.6	∞	977965	101.9564 ng/ml
Midazolam	5.805	87979	1157.94	87.3	1889.42	91010	102.5308 ng/ml
Nortriptyline	5.693	480860	∞	26.6	∞	139935	101.1939 ng/ml
Pseudoephedrine	2.608	2092073	13194.33	13.2	13204.13	977965	100.8645 ng/ml

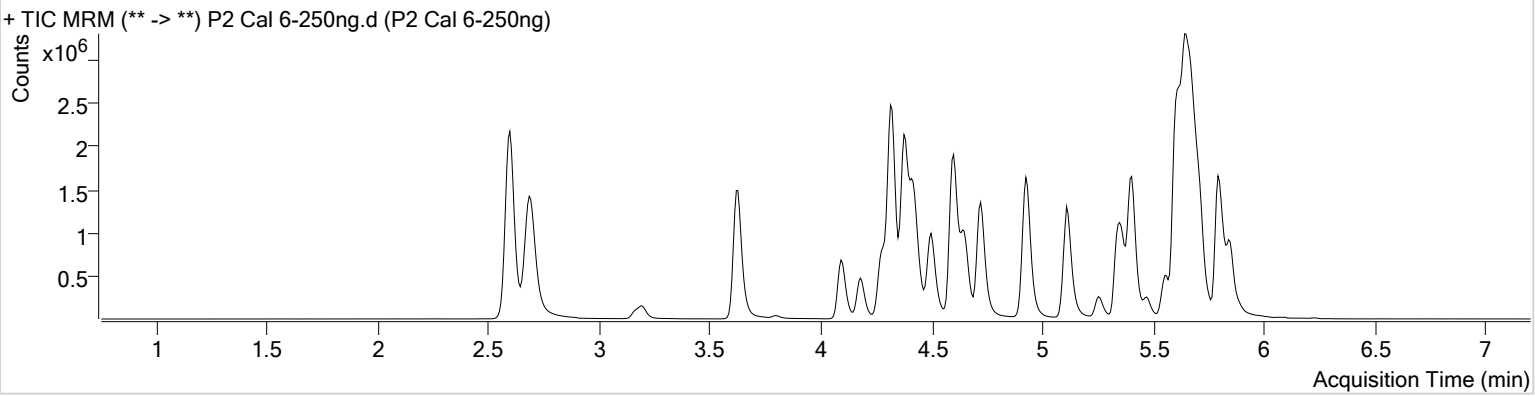
$ SJ TS

AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Calibration Last Update 11/20/2020 8:51:19 AM

Instrument	Instrument 1	**Data File**	P2 Cal 6-250ng.d
Type	Cal	**Sample**	P2 Cal 6-250ng
Acq. Method	AM 28 MDQ P2.m	**Operator**	Tamara Salazar
Sample Position	P6-F1	**Comment**	
Injection Volume	2		
Acq. Date-Time	11/19/2020 3:19:06 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Amitriptyline	5.671	1925172	6459.68	45.8	2945.59	132587	245.8230 ng/ml
Clonazolam	5.558	503712	770569.59	29.0	∞	19885	241.7030 ng/ml
Doxepin	5.363	934586	23941.53	44.2	3472.77	257825	244.8187 ng/ml
Etizolam	5.818	490441	4965.63	27.6	∞	228612	282.9506 ng/ml
Flunitrazepam	5.649	650269	8769.20	34.4	2229.38	51552	251.1829 ng/ml
Flurazepam	5.339	2147442	182274.90	13.1	∞	51552	364.1503 ng/ml
Levetiracetam	2.687	556817	13851.12	172.5	10002.98	958096	246.4380 ng/ml
Maprotiline	5.671	1925172	6459.68	20.7	8199.09	132587	234.5857 ng/ml
Methocarbamol	4.425	491900	34065.02	78.0	∞	958096	219.8547 ng/ml
Midazolam	5.805	181984	1240.88	91.5	10496.71	78351	246.1171 ng/ml
Nortriptyline	5.693	882641	75958.29	27.2	2853.09	105410	246.5826 ng/ml
Pseudoephedrine	2.601	5024473	∞	13.2	∞	958096	247.5616 ng/ml

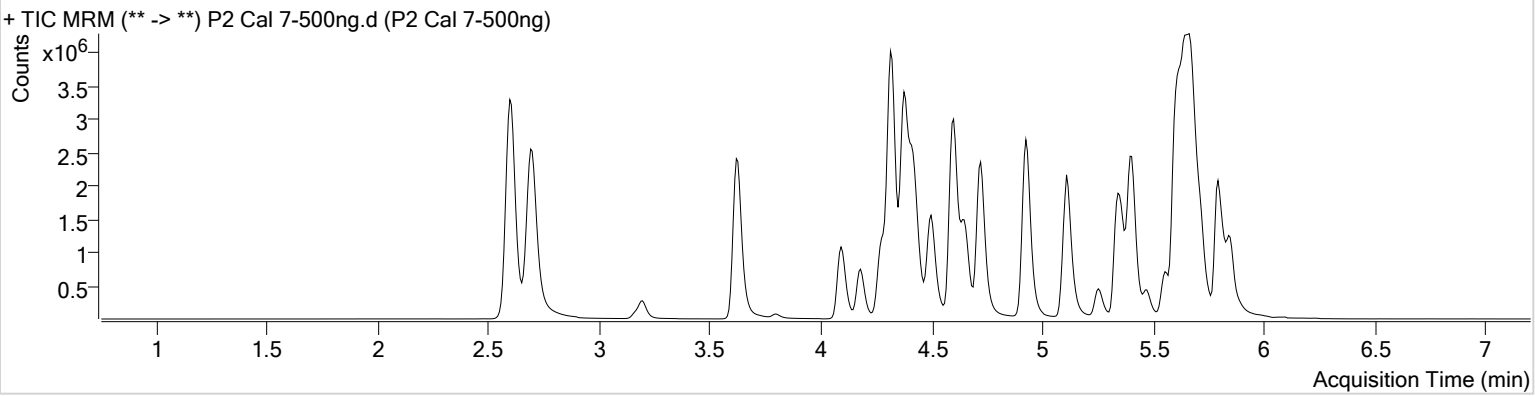
$ SJ TS

AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Calibration Last Update 11/20/2020 8:51:19 AM

Instrument	Instrument 1	**Data File**	P2 Cal 7-500ng.d
Type	Cal	**Sample**	P2 Cal 7-500ng
Acq. Method	AM 28 MDQ P2.m	**Operator**	Tamara Salazar
Sample Position	P6-G1	**Comment**	
Injection Volume	2		
Acq. Date-Time	11/19/2020 3:29:39 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Amitriptyline	5.671	2867120	31940.69	46.6	1948.96	104293	465.7577 ng/ml
Clonazolam	5.558	774599	∞	29.3	∞	17269	429.0475 ng/ml
Doxepin	5.363	1504791	3483.59	45.8	4880.90	210061	484.2724 ng/ml
Etizolam	5.818	733678	3416.62	27.7	6448.12	140030	690.0922 ng/ml
Flunitrazepam	5.649	743119	5612.53	34.7	6910.68	33150	447.6793 ng/ml
Flurazepam	5.332	3860261	53491.32	13.2	63456.03	33150	1013.7429 ng/ml
Levetiracetam	2.687	848619	44654.27	172.6	35202.33	833556	432.7201 ng/ml
Maprotiline	5.671	2867120	31940.69	15.9 **Low**	7296.61	104293	444.1683 ng/ml
Methocarbamol	4.425	715481	43715.66	78.7	30669.58	833556	368.9178 ng/ml
Midazolam	5.798	277016	1461.67	88.5	8987.15	60277	486.8161 ng/ml
Nortriptyline	5.693	1140713	∞	27.3	38111.90	69659	482.2303 ng/ml
Pseudoephedrine	2.601	8749446	12512.76	13.1	∞	833556	495.7079 ng/ml

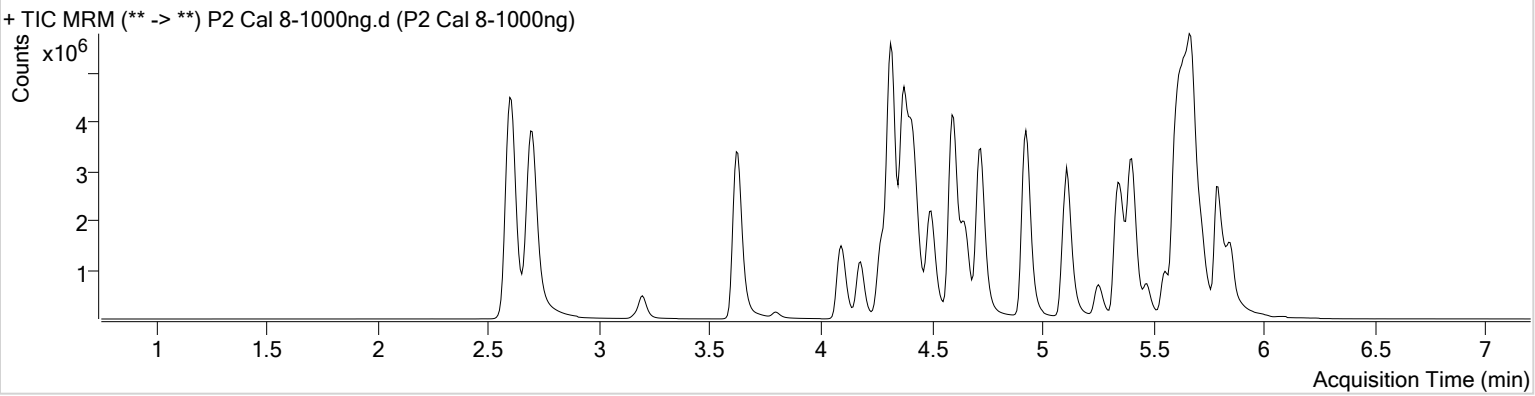
$ SJ TS

AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\111920 AM 28 P2 TS SP SJ_AM 28 27 SP\QuantResults\AM 28 P2_casework.batch.bin
Calibration Last Update 11/20/2020 8:51:19 AM

Instrument	Instrument 1	**Data File**	P2 Cal 8-1000ng.d
Type	Cal	**Sample**	P2 Cal 8-1000ng
Acq. Method	AM 28 MDQ P2.m	**Operator**	Tamara Salazar
Sample Position	P6-H1	**Comment**	
Injection Volume	2		
Acq. Date-Time	11/19/2020 3:40:14 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio		S/N	ISTD Resp.	Final Conc.
Amitriptyline	5.671	4312764	54551.70	49.2		737.81	80947	903.0107 ng/ml
Clonazolam	5.551	962055	∞	31.1		∞	13699	672.5276 ng/ml
Doxepin	5.363	2352616	75439.72	47.3		16157.68	164784	965.6125 ng/ml
Etizolam	5.818	928818	∞	27.0		2960.49	70615	1731.4254 ng/ml
Flunitrazepam	5.656	569367	∞	35.4		∞	12521	909.8666 ng/ml
Flurazepam	5.339	5876415	466446.13	13.4		∞	12521	4078.7390 ng/ml
Levetiracetam	2.694	1118974	4243.20	172.1		8985.92	629760	756.2315 ng/ml
Maprotiline	5.671	4312764	54551.70	12.1	Low	13088.36	80947	860.8400 ng/ml
Methocarbamol	4.432	812288	59468.11	80.1		∞	629760	555.3856 ng/ml
Midazolam	5.805	380864	2129.07	89.5		1097.34	40880	986.7306 ng/ml
Nortriptyline	5.693	1645196	22848.01	28.1		12460.72	49398	980.7587 ng/ml
Pseudoephedrine	2.601	13000622	9762.62	13.3		10041.56	629760	975.1157 ng/ml