

reviewed

Bylee

15

3/20/2019

Worklist: 3107

<u>LAB CASE</u>	<u>ITEM</u>	<u>TASK ID</u>	<u>DESCRIPTION</u>
P2019-0771	1	145555	AM 28 Blood Multi-Drug Quant Panel 2 by LC-Q
P2019-0794	1	145556	AM 28 Blood Multi-Drug Quant Panel 2 by LC-Q



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

Extraction Date: 03/21/19
Plate lot#: IDP-112-19024

Analyst: Tamara Salazar
Plate Expiration: 07/24/19

Mobile phase A: 5mM Amm Form + 0.01% FA
0.5M Ammonium Hydroxide

Mobile phase B: 0.01% Formic Acid in MeOH
Ethyl Acetate 20% Methanol in Water

Blank Blood Lot: 445283-1
LCMS-QQQ ID: 069910

Column: ~~Agilent 120 EC-C18 (2.1x 100-4um)~~

Agilent 120 EC-C18 (2.1 x 100-2.7um) 09/16/19 TS

Pre-Analytic:

- 1. Check levels of mobile phases and needle wash refill as needed. Ensure waste is not full.
- 2. Ensure correct column is installed and begin mobile phase flow allow to equilibrate ~ 30 minutes.
- 3. Create worklist.

Analytic:

- 1. Remove standards, plate, controls, and samples from cold storage. Allow to reach room temperature.
- 2. Pipette **250µL blood (calibrated pipette) Pipette ID: 16** in wells of analytical (standards) plate.
- 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. *Shaker ID: 067105*
- 4. Pipette **250µL 00.5M ammonium hydroxide** in wells of analytical plate.
- 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 6. Transfer **300µL of blood+base** mixture to corresponding wells of SLE+ plate.
- 7. Apply positive pressure for approx. 10-15 seconds (or until no liquid remains on top of sorbent).
(Load at 85-100 PSI- Selector to the right) Manifold ID: 067104
- 8. Wait 5 minutes.
- 9. Add **900uL ethyl acetate**.
- 10. Wait 5 minutes.
- 11. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left)*.
- 12. Add **900uL ethyl acetate**.
- 13. Wait 5 minutes.
- 14. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left)*.
- 15. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C.
SPE Dry ID: 067103
- 16. Reconstitute in **100µL 20% MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

Post-Analytic

- 1. Create batch and process data.
Worklist path: *G:\TOX\Pocatello\Falco\2019\AM 28\032119 MDQ P1_P2_Urine Val TS*
Batch Name: *P2 wklst 3107 TS_case samples*
- 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? 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: 7-aminoflunitrazepam, Amitriptyline, Chlorpheniramine, Doxepin, Etizolam, Flurazepam, Maprotiline, Methocarbamol, Midazolam, Nortriptyline

TS

Curves limited: 7-aminoflunitrazepam: 5-100, Etizolam: 5-250, Flurazepam: 5-100, Maprotiline: 5-500, Methocarbamol:
~~5-50~~, Midazolam: 5-500
50-1000 - TS



Idaho State Police Forensic Services

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

Methanol External Control Solution (Lot: 020419)
100 ul each 1 mg/mL stock solution in 9600 ul MeOH

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	184782	
Midazolam	Cerilliant	FE01161704	04/30/2022
Etizolam	Cerilliant	FN06061606	11/30/2020
7-Aminoflunitrazepam	Cerilliant	FN01271505	02/28/2020
Flurazepam	Cerilliant	FE02101501	04/30/2020
Prepared:	02/04/19		
Prepared By:	Tamara Salazar		
Expires:	02/04/2020		

Blood External Control Solution (Lot: WS020419)
50 ul of methanol external control solution was added to 9950 ul of blood.
Approximately 50ng/mL of each compound.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Blood	Hemostat	445283-1
Methanol External Control Solution	-	020419
Prepared:	02/04/19	
Prepared by:	Tamara Salazar	
Expires:	02/04/2020	

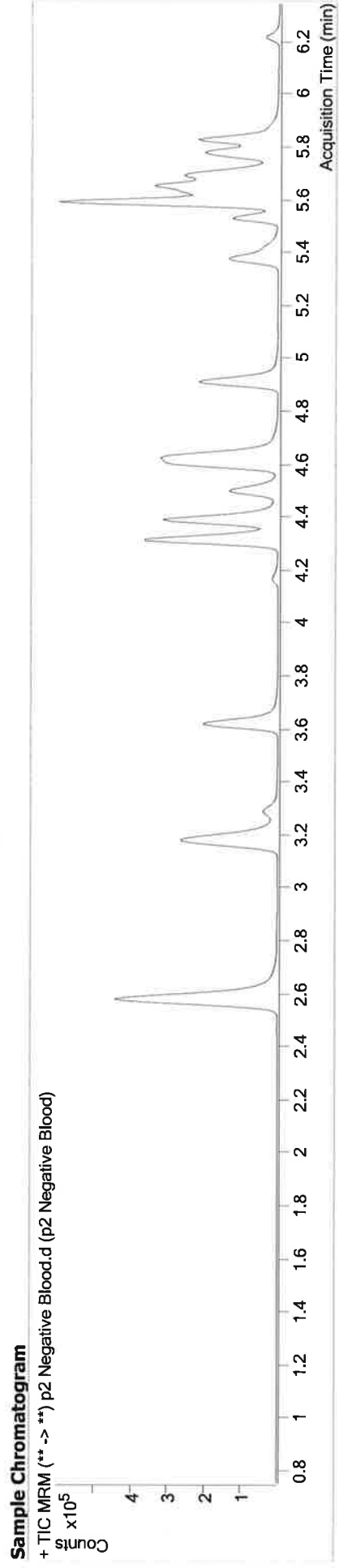
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AM #28 Multi-Drug Quant. Results

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3/26/2019 3:32:51 PM

Instrument Type	FALCO-LCMS (Property ID 069901)	Data File	p2 Negative Blood.d
Acq. Method	MDQ P2 Combined 111418.m	Sample Operator	p2 Negative Blood
Sample Position	P2-E5	Comment	Tamara Salazar
Injection Volume	10		
Acq. Date-Time	3/21/2019 4:03:33 PM		
Sample Info.			



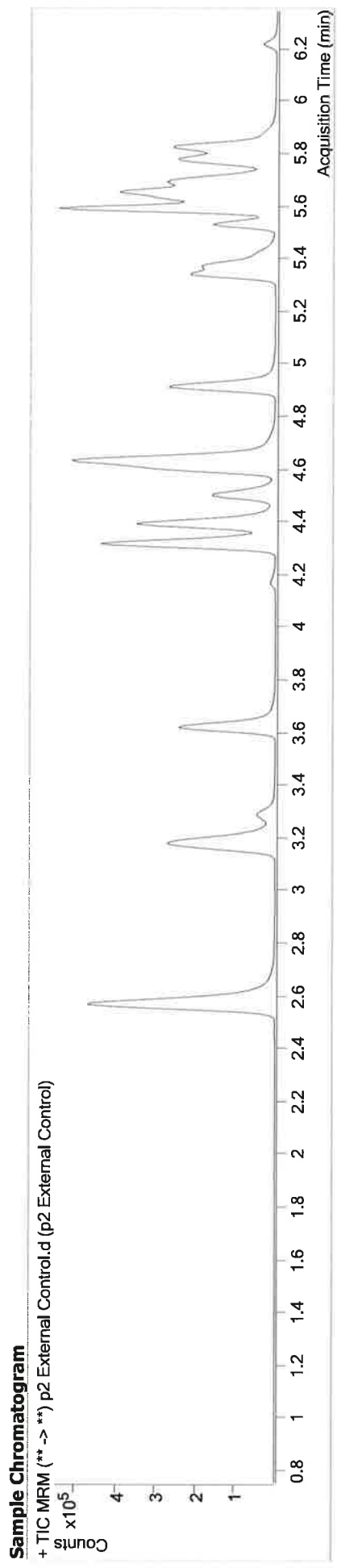
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AM #28 Multi-Drug Quant. Results

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Calibration Last Update 3/26/2019 3:32:51 PM

Instrument Type FALCO-LCMS (Property ID 069901) **Data File** p2 External Control.d
Acq. Method MDQ P2 Combined 111418.m **Sample Operator** p2 External Control
Sample Position P2-F5 **Comment** Tamara Salazar
Injection Volume 10
Acq. Date-Time 3/21/2019 4:24:43 PM
Sample Info.



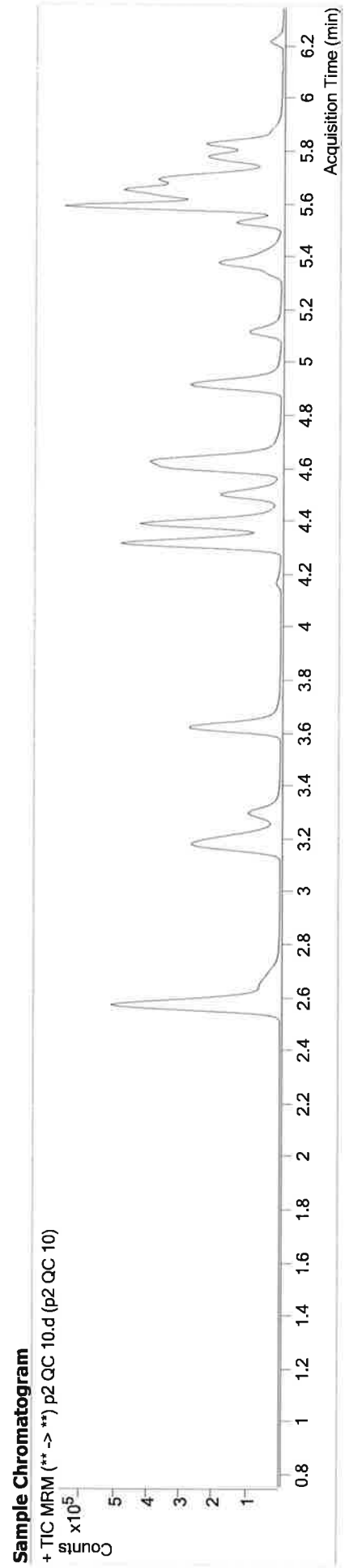
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoflunitrazepam	4.635	384625	48539.29	25.2	12039.77	492664	39.7956 ng/ml
Etizolam	5.816	177206	9894.68	25.6	6577.05	244995	58.7714 ng/ml
Flurazepam	5.338	442708	21820.51	13.6	26461.95	331347	20.3399 ng/ml
Midazolam	5.782	81778	4054.17	91.0	2410.36	284431	45.2991 ng/ml



AM #28 Multi-Drug Quant. Results

Batch results Calibration Last Update D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\P2_wk1st 3107 TS_case samples.batch.bin
3/26/2019 3:32:51 PM

Instrument FALCO-LCMS (Property ID 069901) **Data File** p2 QC 10.d
Type QC **Sample** p2 QC 10
Acq. Method MDQ P2 Combined 111418.m **Operator** Tamara Salazar
Sample Position P2-A5 **Comment**
Injection Volume 10
Acq. Date-Time 3/21/2019 2:28:17 PM
Sample Info.



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoflunitrazepam	4.635	104161	4740.86	25.1	7811.67	495649	9.8908 ng/ml
Amitriptyline	5.689	78255	1658.03	41.6	3129.05	161046	9.7908 ng/ml
Chlorpheniramine	5.118	235163	18623.54	0.4	121.11	396139	6.4805 ng/ml
Doxepin	5.376	34926	4357.49	53.1	743.73	153239	10.6094 ng/ml
Etizolam	5.816	41525	1867.05	25.3	1093.67	241984	12.0458 ng/ml
Flurazepam	5.338	88515	6680.85	13.7	7866.54	280720	6.7232 ng/ml
Maprotiline	5.689	78255	1658.03	31.6	600.32	161046	9.3223 ng/ml
Midazolam	5.775	20439	1915.89	86.6	2796.11	287029	10.6208 ng/ml
Nortriptyline	5.711	41087	4331.25	37.4	990.09	156379	10.4536 ng/ml

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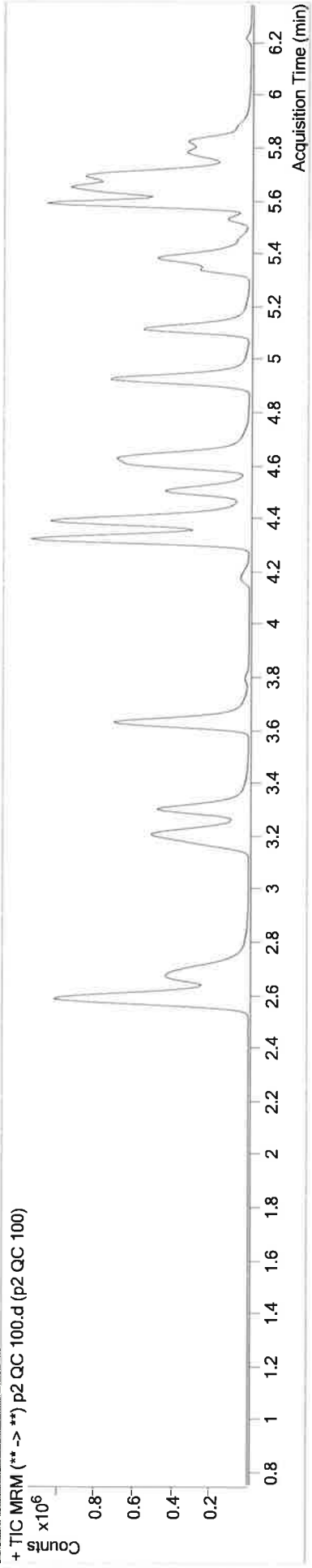


AM #28 Multi-Drug Quant. Results

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Instrument	FALCO-LCMS (Property ID 069901)	Data File	p2 QC 100.d
Type	QC	Sample	p2 QC 100
Acq. Method	MDQ P2 Combined 111418.m	Operator	Tamara Salazar
Sample Position	P2-B5	Comment	
Injection Volume	10		
Acq. Date-Time	3/21/2019 2:49:27 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoflunitrazepam	4.635	811993	118167.66	25.1	45514.80	459881	91.4205 ng/ml
Amitriptyline	5.689	417608	∞	43.7	9214.07	88957	97.9719 ng/ml
Chlorpheniramine	5.118	1430822	∞	0.4	300.95	210384	63.9456 ng/ml
Doxepin	5.376	202415	∞	46.4	8503.75	87150	107.5863 ng/ml
Etizolam	5.816	262936	5020.89	25.8	∞	168380	129.7663 ng/ml
Flurazepam	5.338	533669	∞	13.8	3823.55	175312	43.1242 ng/ml
Maprotiline	5.689	417608	∞	27.6	1379.29	88957	99.6065 ng/ml
Methocarbamol	4.414	96669	12757.78	94.1	3600.78	1051242	84.3156 ng/ml
Midazolam	5.775	131412	2726.11	88.9	7213.18	204137	102.4104 ng/ml
Nortriptyline	5.711	210881	21483.07	37.8	1833.13	83159	100.2425 ng/ml

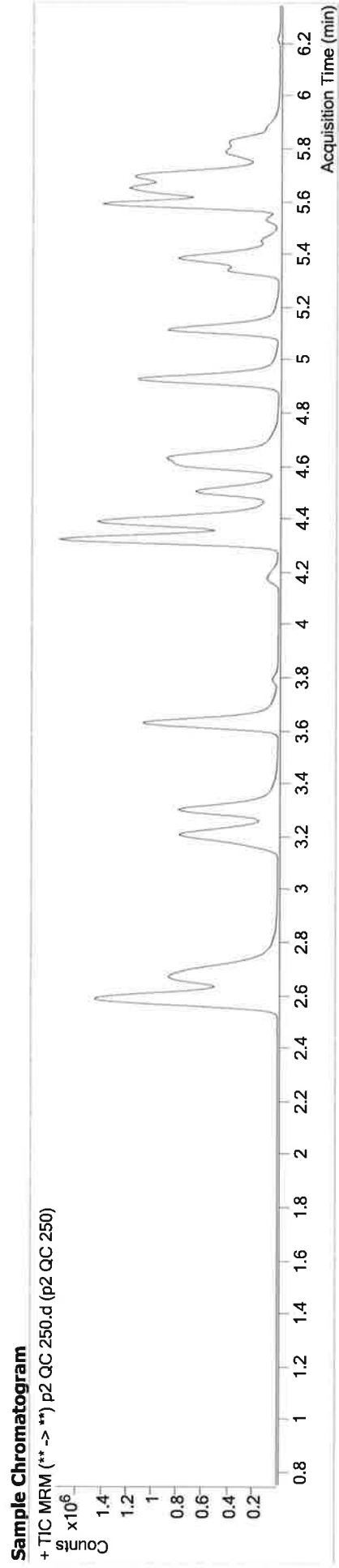
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AM #28 Multi-Drug Quant. Results

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3/26/2019 3:32:51 PM

Instrument FALCO-LCMS (Property ID 069901) **Data File** p2 QC 250.d
Type QC **Sample** p2 QC 250
Acq. Method MDQ P2 Combined 111418.m **Operator** Tamara Salazar
Sample Position P2-C5
Injection Volume 10
Acq. Date-Time 3/21/2019 3:10:36 PM
Sample Info.



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoflunitrazepam	4.635	1511786	38830.70	25.2	20710.91	438926	179.4031 ng/ml
Amitriptyline	5.689	554774	12608.23	43.2	6532.95	49094	236.3820 ng/ml
Chlorpheniramine	5.118	2237420	∞	0.4	8940.39	111666	186.4765 ng/ml
Doxepin	5.376	268242	∞	50.3	1129.65	50621	245.3850 ng/ml
Etizolam	5.816	454455	6290.13	25.5	6967.81	137099	278.2543 ng/ml
Flurazepam	5.338	854796	103209.68	13.9	38352.72	108857	107.2663 ng/ml
Maprotiline	5.689	554774	12608.23	26.7	11023.85	49094	241.3176 ng/ml
Methocarbamol	4.414	158512	5020.02	94.1	∞	812539	251.7723 ng/ml
Midazolam	5.775	230830	9477.08	88.1	5830.40	154505	238.7240 ng/ml
Nortriptyline	5.718	265452	∞	38.4	137649.26	42202	248.5345 ng/ml

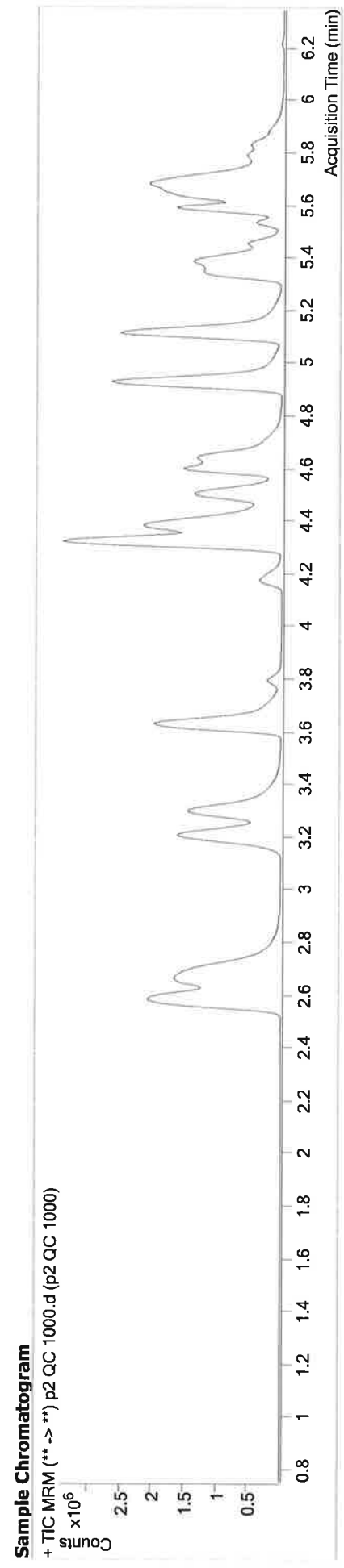
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AM #28 Multi-Drug Quant. Results

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Instrument FALCO-LCMS (Property ID 069901) **Data File** p2 QC 1000.d
Type QC **Sample** p2 QC 1000
Acq. Method MDQ P2 Combined 111418.m **Operator** Tamara Salazar
Sample Position P2-D5
Injection Volume 10
Acq. Date-Time 3/21/2019 3:31:47 PM
Sample Info.



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoflunitrazepam	4.641	2751988	∞	25.3	22575.22	303153	474.6796 ng/ml
Amitriptyline	5.683	1508818	41979.62	46.5	20877.50	36776	859.2407 ng/ml
Chlorpheniramine	5.118	7895298	∞	0.4	694.52	64275	1138.1474 ng/ml
Doxepin	5.376	902801	105582.62	50.3	22630.65	43445	962.1274 ng/ml
Etizolam	5.816	753535	∞	25.2	1202.29	23701	2690.1980 ng/ml
Flurazepam	5.338	2848180	85821.60	13.9	40228.24	169536	226.6209 ng/ml
Maprotiline	5.683	1508818	41979.62	13.2 Low	1054.77	36776	879.0313 ng/ml
Methocarbamol	4.421	240569	22863.88	94.5	236.61	403266	903.6877 ng/ml
Midazolam	5.775	411226	∞	89.8	5949.94	98725	667.0033 ng/ml
Nortriptyline	5.718	760277	872384.34	38.6	219571.00	29585	1015.1430 ng/ml

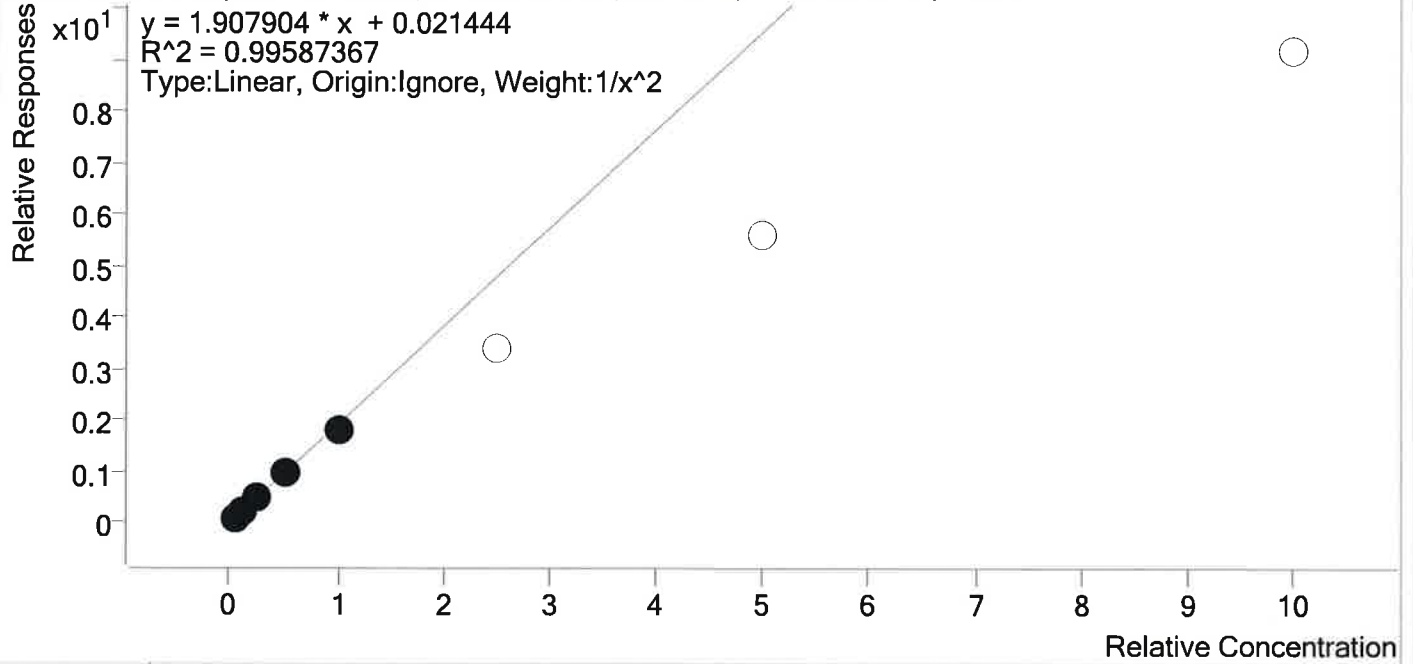
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AM #28 Multi-Drug Quant. Calibration Curve Report

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Last Cal. Update 3/26/2019 3:32 PM
Analyst Name ISP\Datastor
Analyte 7-aminoflunitrazepam **Internal Standard** 7-aminoflunitrazepam-D7

7-aminoflunitrazepam - 8 Levels, 5 Levels Used, 8 Points, 5 Points Used, 4 QCs



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	4.9	97.1
p2 Cal 2- 10ng	2	✓	10.0	10.5	104.6
p2 Cal 3 -25ng	3	✓	25.0	26.1	104.5
p2 Cal 4-50ng	4	✓	50.0	50.4	100.8
p2 Cal 5-100ng	5	✓	100.0	93.0	93.0
p2 Cal 6-250ng	6	×	250.0	179.0	71.6
p2 Cal 7-500ng	7	×	500.0	293.5	58.7
p2 Cal 8-1000ng	8	×	1000.0	480.3	48.0

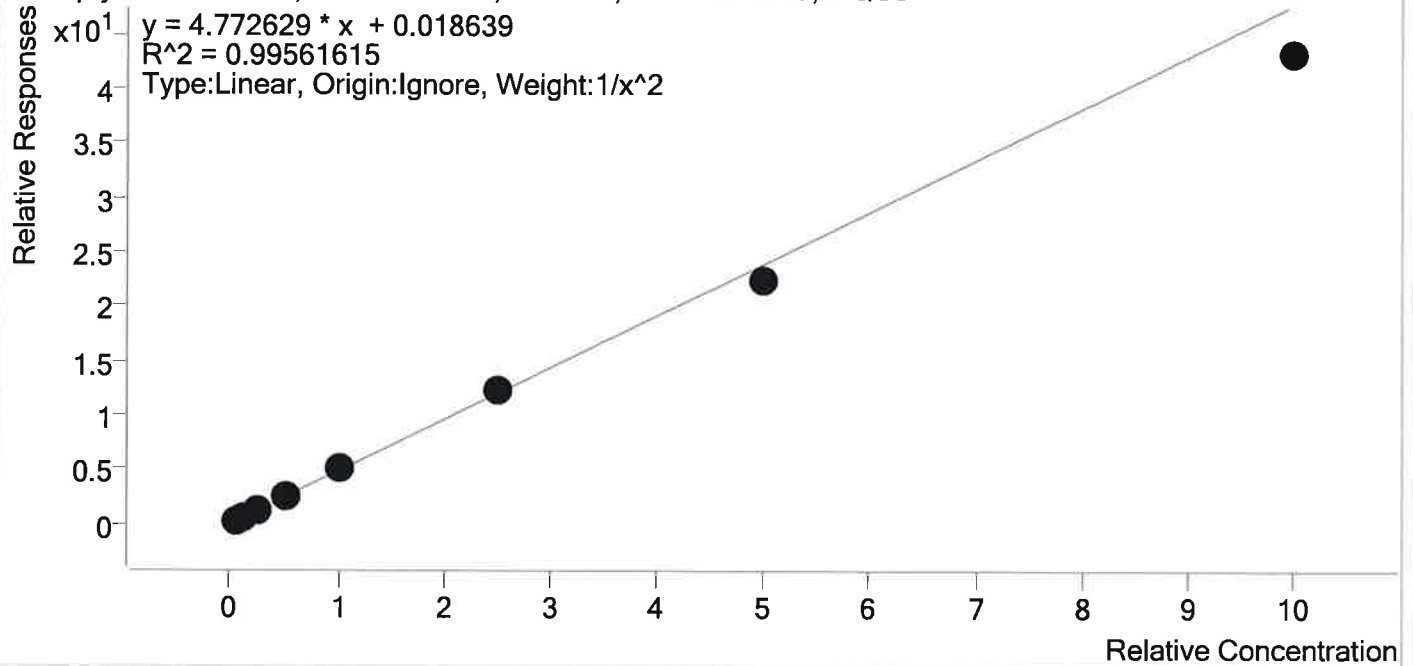
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AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\IP2 wk1st 3107
 TS_case samples.batch.bin
Last Cal. Update 3/26/2019 3:32 PM
Analyst Name ISP\Datastor
Analyte Amitriptyline **Internal Standard** Amitriptyline-D3

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



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	4.9	98.5
p2 Cal 2- 10ng	2	✓	10.0	10.0	100.4
p2 Cal 3 -25ng	3	✓	25.0	25.4	101.5
p2 Cal 4-50ng	4	✓	50.0	53.9	107.8
p2 Cal 5-100ng	5	✓	100.0	106.0	106.0
p2 Cal 6-250ng	6	✓	250.0	253.6	101.4
p2 Cal 7-500ng	7	✓	500.0	469.0	93.8
p2 Cal 8-1000ng	8	✓	1000.0	905.2	90.5

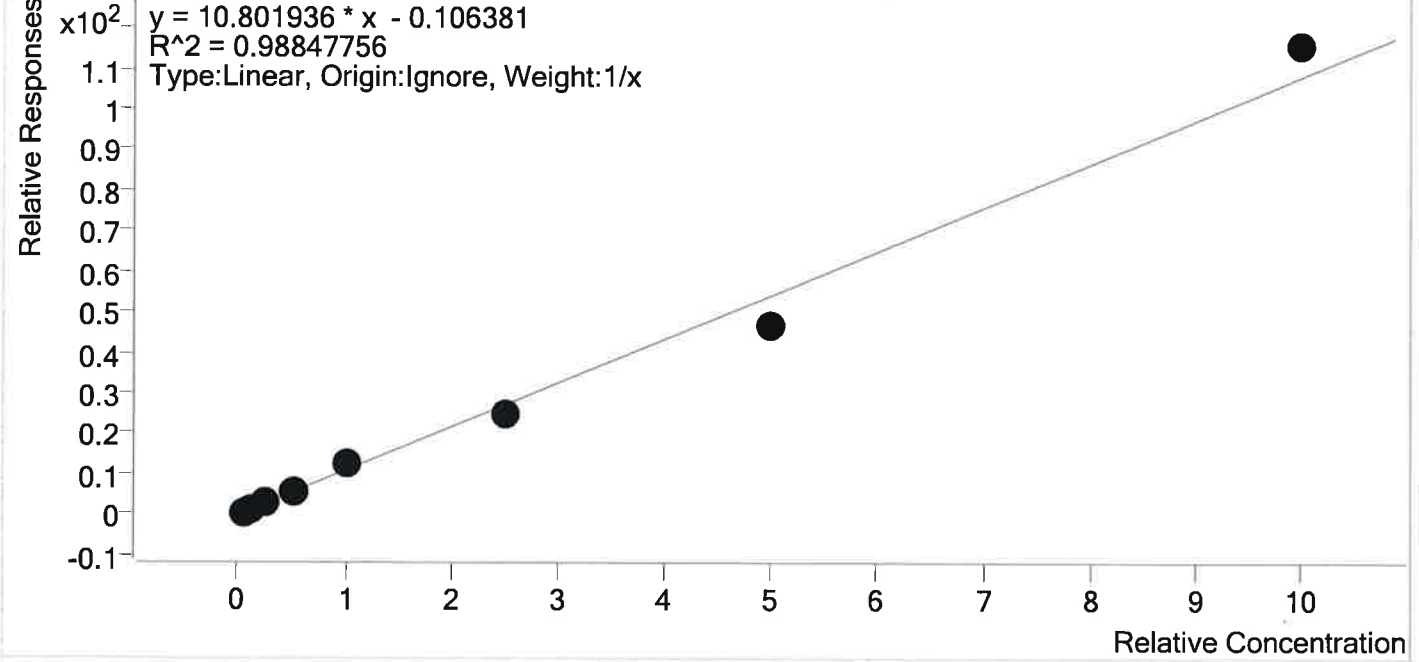
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AM #28 Multi-Drug Quant. Calibration Curve Report

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 TS_case samples.batch.bin
Last Cal. Update 3/26/2019 3:32 PM
Analyst Name ISP\Datator
Analyte Chlorpheniramine **Internal Standard** Imipramine-D3

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



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	4.0	80.4
p2 Cal 2- 10ng	2	✓	10.0	11.0	109.8
p2 Cal 3 -25ng	3	✓	25.0	25.7	102.7
p2 Cal 4-50ng	4	✓	50.0	52.1	104.3
p2 Cal 5-100ng	5	✓	100.0	118.5	118.5
p2 Cal 6-250ng	6	✓	250.0	228.7	91.5
p2 Cal 7-500ng	7	✓	500.0	429.3	85.9
p2 Cal 8-1000ng	8	✓	1000.0	1070.7	107.1

TS



AM #28 Multi-Drug Quant. Calibration Curve Report

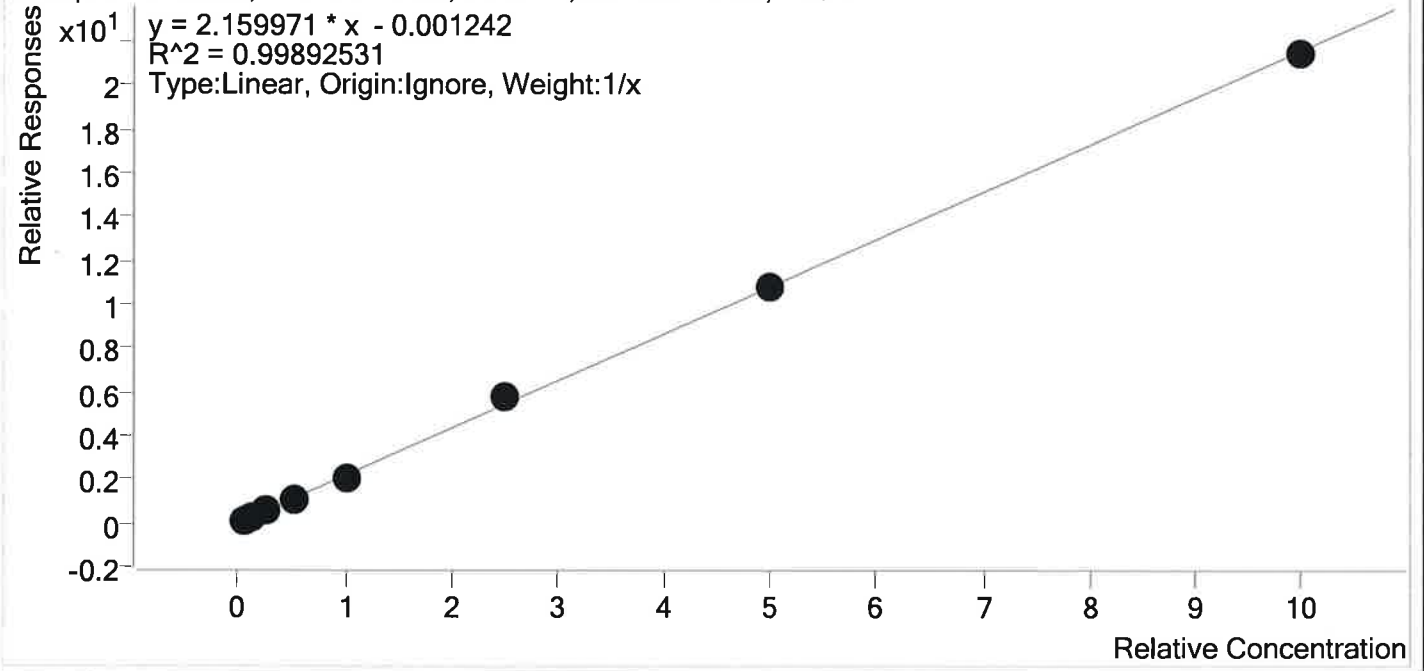
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 TS_case samples.batch.bin

Last Cal. Update 3/26/2019 3:32 PM

Analyst Name ISP\Datator

Analyte Doxepin **Internal Standard** Doxepin-D3

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



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	5.2	103.0
p2 Cal 2- 10ng	2	✓	10.0	11.1	110.7
p2 Cal 3 -25ng	3	✓	25.0	22.8	91.1
p2 Cal 4-50ng	4	✓	50.0	46.6	93.2
p2 Cal 5-100ng	5	✓	100.0	96.2	96.2
p2 Cal 6-250ng	6	✓	250.0	267.0	106.8
p2 Cal 7-500ng	7	✓	500.0	497.2	99.4
p2 Cal 8-1000ng	8	✓	1000.0	993.9	99.4

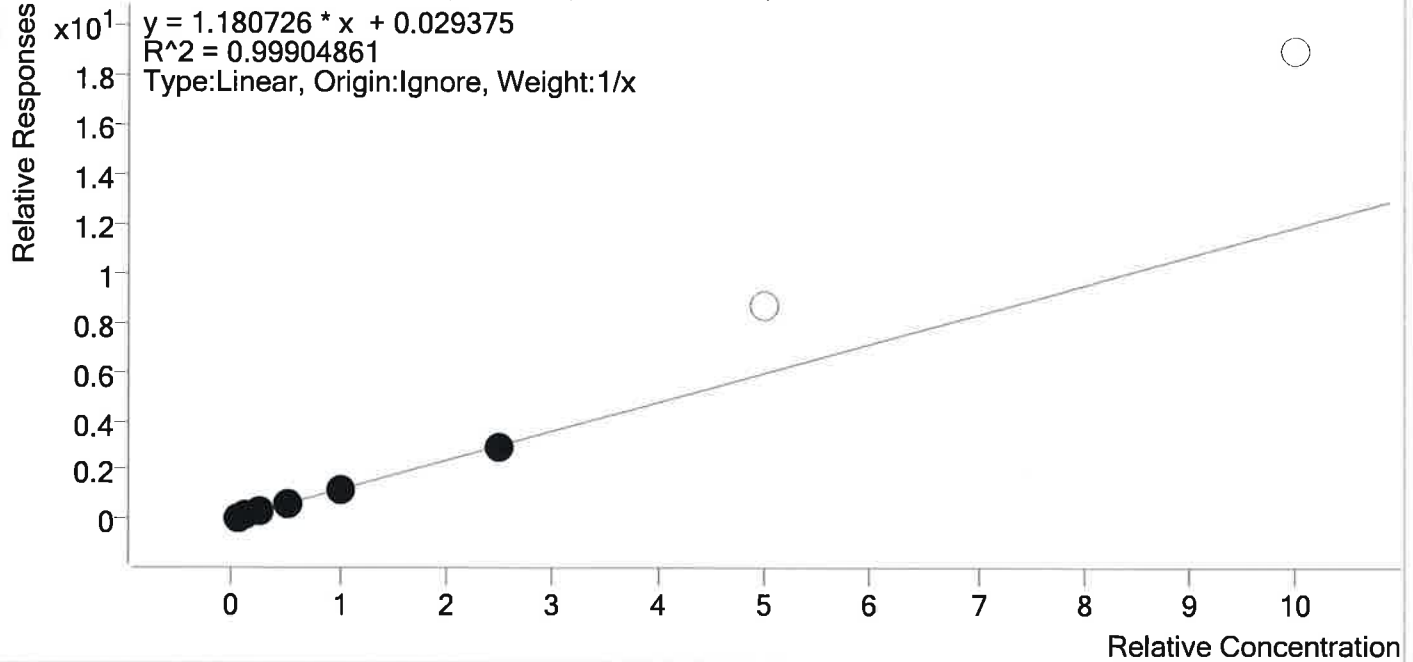
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AM #28 Multi-Drug Quant. Calibration Curve Report

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 TS_case samples.batch.bin
Last Cal. Update 3/26/2019 3:32 PM
Analyst Name ISP\Datastor
Analyte Etizolam **Internal Standard** Estazolam-D5

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



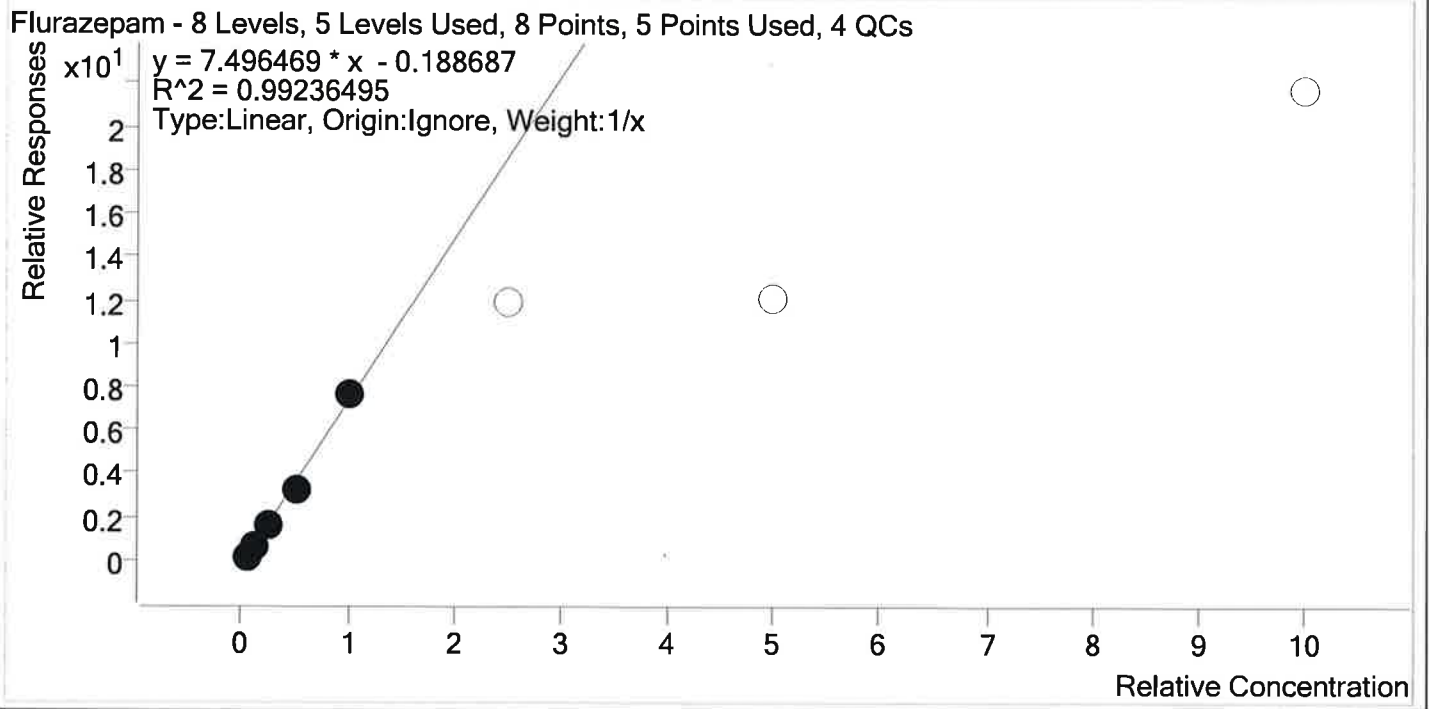
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	4.6	92.7
p2 Cal 2- 10ng	2	✓	10.0	9.8	98.4
p2 Cal 3 -25ng	3	✓	25.0	26.9	107.5
p2 Cal 4-50ng	4	✓	50.0	50.2	100.3
p2 Cal 5-100ng	5	✓	100.0	102.9	102.9
p2 Cal 6-250ng	6	✓	250.0	245.6	98.3
p2 Cal 7-500ng	7	×	500.0	726.8	145.4
p2 Cal 8-1000ng	8	×	1000.0	1604.3	160.4

TS



AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\P2 wk1st 3107
 TS_case samples.batch.bin
Last Cal. Update 3/26/2019 3:32 PM
Analyst Name ISP\Datastor
Analyte Flurazepam **Internal Standard** Sufentanil-d5



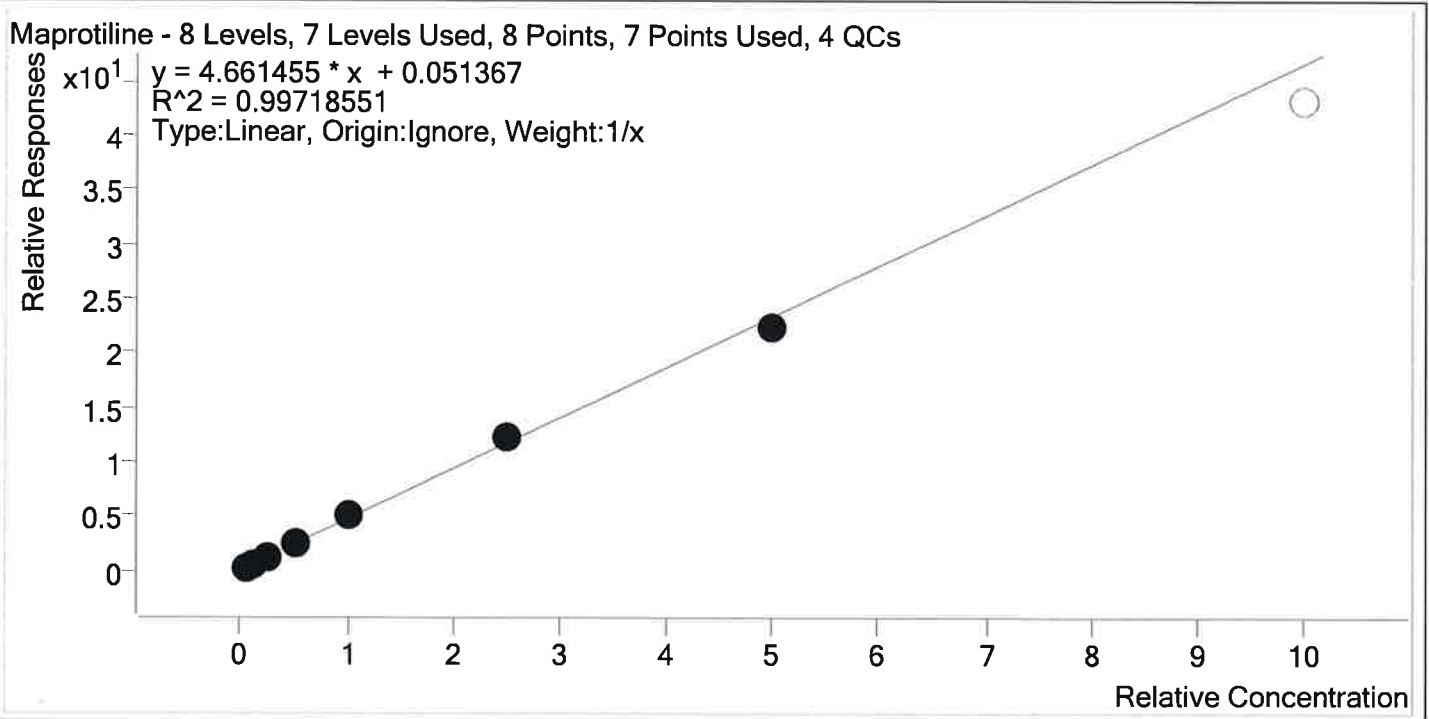
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	4.8	95.7
p2 Cal 2- 10ng	2	✓	10.0	11.4	114.3
p2 Cal 3 -25ng	3	✓	25.0	23.6	94.5
p2 Cal 4-50ng	4	✓	50.0	45.4	90.8
p2 Cal 5-100ng	5	✓	100.0	104.8	104.8
p2 Cal 6-250ng	6	×	250.0	162.7	65.1
p2 Cal 7-500ng	7	×	500.0	164.4	32.9
p2 Cal 8-1000ng	8	×	1000.0	292.3	29.2

TS



AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\IP2 wk1st 3107
 TS_case samples.batch.bin
Last Cal. Update 3/26/2019 3:32 PM
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	4.3	86.8
p2 Cal 2- 10ng	2	✓	10.0	9.6	95.8
p2 Cal 3 -25ng	3	✓	25.0	25.3	101.1
p2 Cal 4-50ng	4	✓	50.0	54.5	109.0
p2 Cal 5-100ng	5	✓	100.0	107.9	107.9
p2 Cal 6-250ng	6	✓	250.0	258.9	103.6
p2 Cal 7-500ng	7	✓	500.0	479.5	95.9
p2 Cal 8-1000ng	8	×	1000.0	926.1	92.6

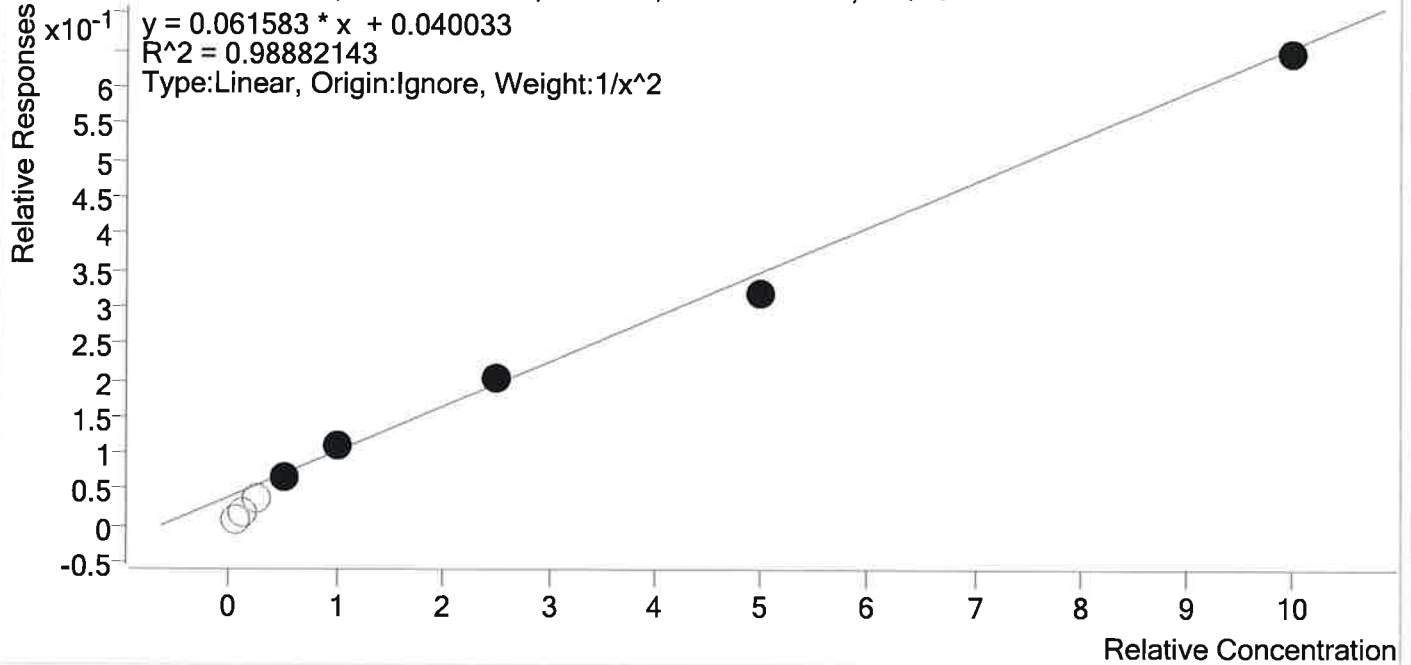


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AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\P2 wk1st 3107
 TS_case samples.batch.bin
Last Cal. Update 3/26/2019 3:32 PM
Analyst Name ISP\Datastor
Analyte Methocarbamol **Internal Standard** Pseudoephedrine-D3

Methocarbamol - 8 Levels, 5 Levels Used, 8 Points, 5 Points Used, 4 QCs



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	×	5.0	0.0	0.0
p2 Cal 2- 10ng	2	×	10.0	0.0	0.0
p2 Cal 3 -25ng	3	×	25.0	0.0	0.0
p2 Cal 4-50ng	4	✓	50.0	47.2	94.4
p2 Cal 5-100ng	5	✓	100.0	111.1	111.1
p2 Cal 6-250ng	6	✓	250.0	262.6	105.0
p2 Cal 7-500ng	7	✓	500.0	453.8	90.8
p2 Cal 8-1000ng	8	✓	1000.0	986.3	98.6

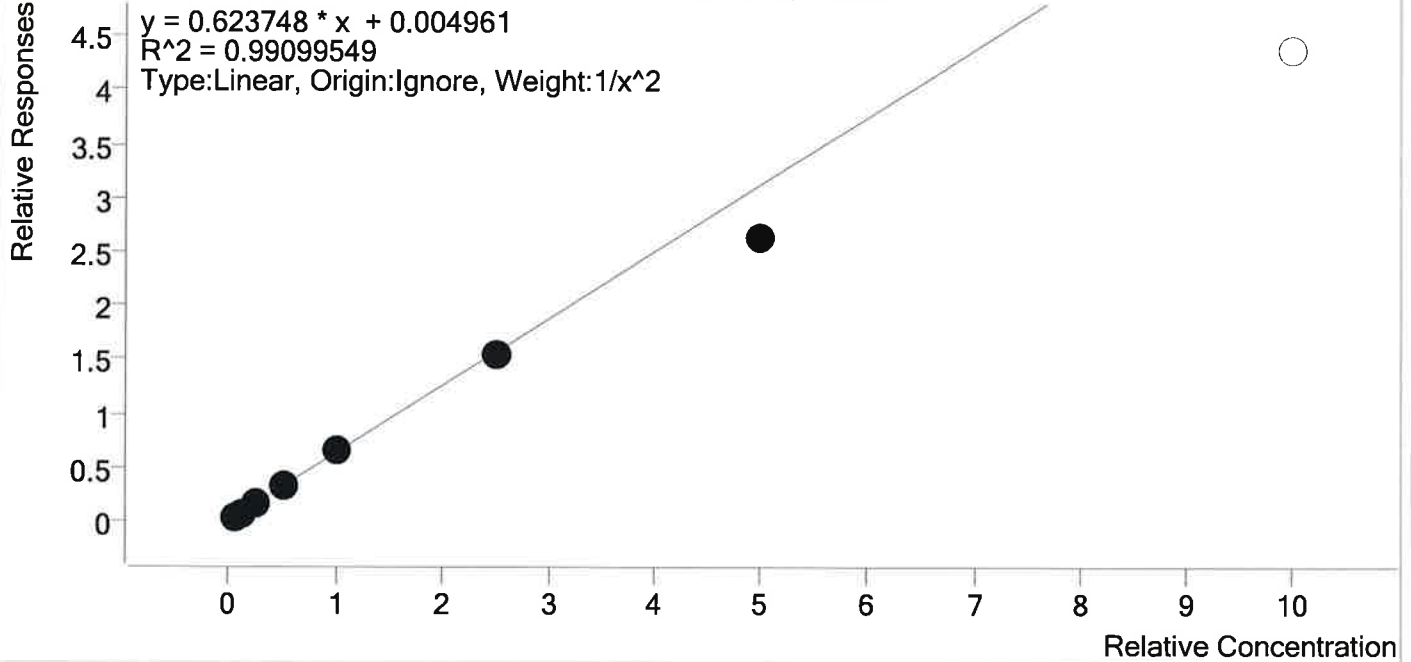
B



AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\P2 wk1st 3107
 TS_case samples.batch.bin
Last Cal. Update 3/26/2019 3:32 PM
Analyst Name ISP\Datastor
Analyte Midazolam **Internal Standard** Midazolam-D4

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



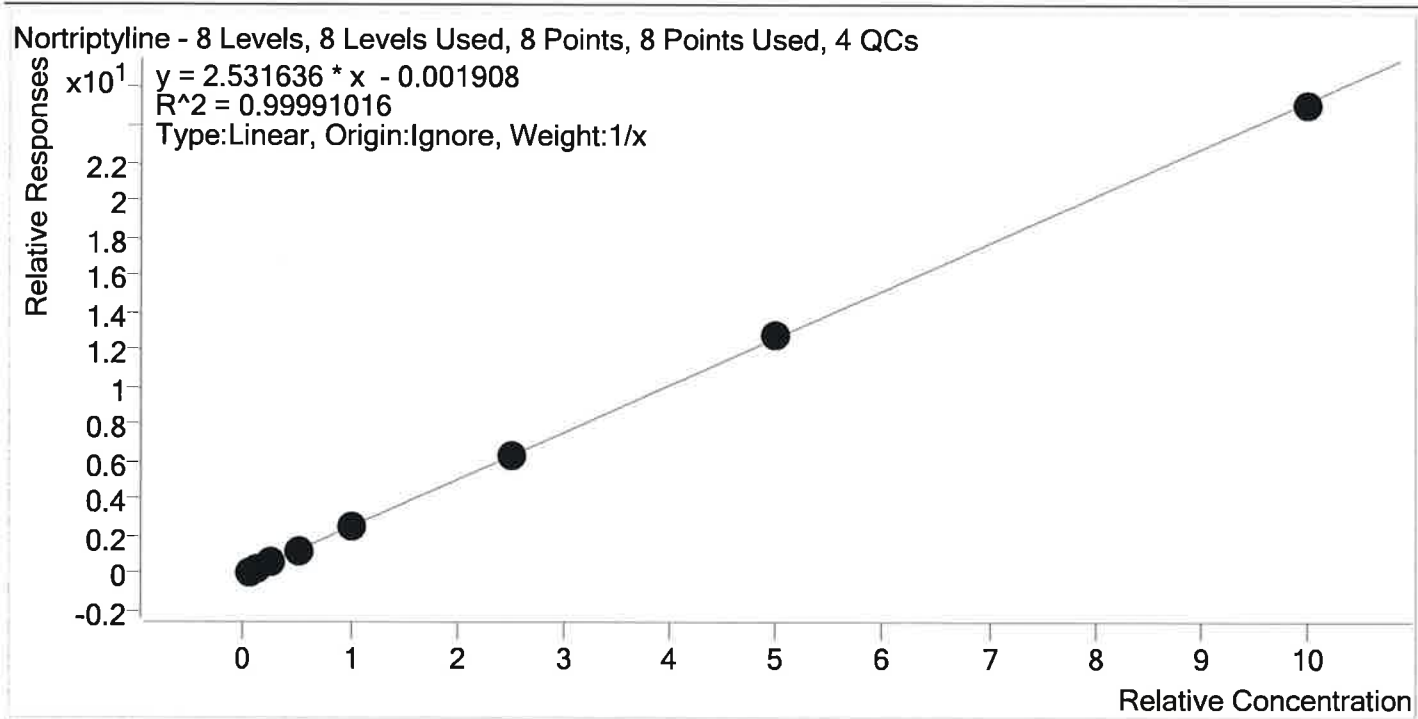
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
p2 Cal 1-5ng	1	✓	5.0	4.8	96.5
p2 Cal 2- 10ng	2	✓	10.0	10.3	102.8
p2 Cal 3 -25ng	3	✓	25.0	26.7	106.7
p2 Cal 4-50ng	4	✓	50.0	53.6	107.2
p2 Cal 5-100ng	5	✓	100.0	104.4	104.4
p2 Cal 6-250ng	6	✓	250.0	245.5	98.2
p2 Cal 7-500ng	7	✓	500.0	420.9	84.2
p2 Cal 8-1000ng	8	×	1000.0	699.8	70.0

B



AM #28 Multi-Drug Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\P2 wk1st 3107
 TS_case samples.batch.bin
Last Cal. Update 3/26/2019 3:32 PM
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	4.9	97.3
p2 Cal 2- 10ng	2	✓	10.0	10.1	101.3
p2 Cal 3 -25ng	3	✓	25.0	25.0	100.0
p2 Cal 4-50ng	4	✓	50.0	50.3	100.5
p2 Cal 5-100ng	5	✓	100.0	99.7	99.7
p2 Cal 6-250ng	6	✓	250.0	252.3	100.9
p2 Cal 7-500ng	7	✓	500.0	505.8	101.2
p2 Cal 8-1000ng	8	✓	1000.0	992.0	99.2

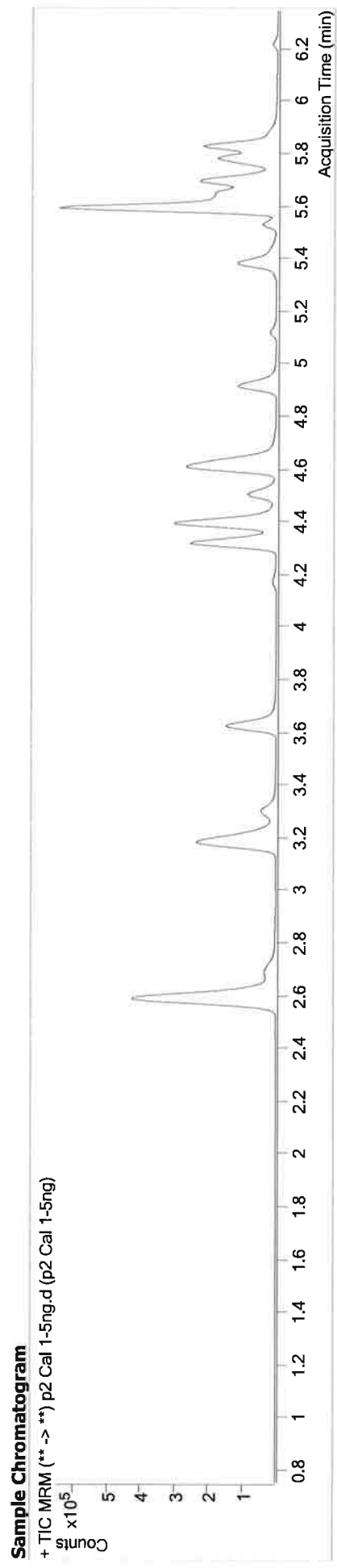
8



AM #28 Multi-Drug Quant. Results

Batch results Calibration Last Update D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\P2 wklist 3107 TS_case samples.batch.bin 3/26/2019 3:32:51 PM

Instrument Type	FALCO-LCMS (Property ID 069901)	Data File	p2 Cal 1-5ng.d
Acq. Method	Cal	Sample	p2 Cal 1-5ng
Sample Position	MDQ P2 Combined 111418.m	Operator	Tamara Salazar
Injection Volume	P2-A4	Comment	
Acq. Date-Time	10		
Sample Info.	3/21/2019 12:42:23 PM		



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoflunitrazepam	4.635	58031	2281.12	24.8	5216.18	508760	4.8545 ng/ml
Amitriptyline	5.689	12414	∞	41.4	446.34	48934	4.9250 ng/ml
Chlorpheniramine	5.125	41332	931.26	0.3	24.41	126078	4.0197 ng/ml
Doxepin	5.376	5382	295.35	48.5	181.46	48909	5.1520 ng/ml
Etizolam	5.816	25707	18213.36	24.6	3016.67	305749	4.6330 ng/ml
Flurazepam	5.338	13786	1111.01	13.8	192.40	81067	4.7855 ng/ml
Maprotiline	5.689	12414	∞	32.9	152.29	48934	4.3404 ng/ml
Midazolam	5.775	6817	915.07	93.2	10180.48	194476	4.8249 ng/ml
Nortriptyline	5.718	5829	212.65	39.5	260.33	48075	4.8643 ng/ml

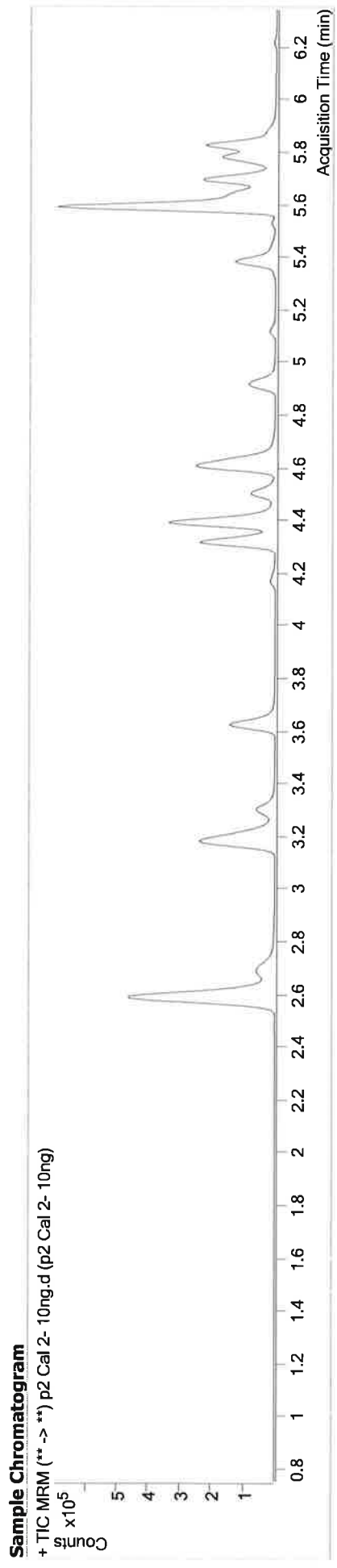
15



AM #28 Multi-Drug Quant. Results

Batch results Calibration Last Update D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\P2 wkst 3107 TS_case samples.batch.bin
3/26/2019 3:32:51 PM

Instrument Type FALCO-LCMS (Property ID 069901) **Data File** p2 Cal 2- 10ng.d
Acq. Method Cal **Sample Operator** p2 Cal 2- 10ng Tamara Salazar
Sample Position MDQ P2 Combined 111418.m
Injection Volume P2-B4 10
Acq. Date-Time 3/21/2019 12:53:08 PM
Sample Info.



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoflunitrazepam	4.635	106072	47147.86	24.9	3152.88	480106	10.4561 ng/ml
Amitriptyline	5.689	6579	333.73	40.7	379.23	13217	10.0397 ng/ml
Chlorpheniramine	5.125	41824	847.24	0.4	29.66	38741	10.9791 ng/ml
Doxepin	5.376	3774	186.14	47.1	180.62	15859	11.0742 ng/ml
Etizolam	5.816	47404	4601.87	25.0	∞	325601	9.8426 ng/ml
Flurazepam	5.338	13873	4528.88	13.9	6264.37	20770	11.4268 ng/ml
Maprotiline	5.689	6579	333.73	33.2	70.37	13217	9.5771 ng/ml
Midazolam	5.775	10919	13552.76	92.1	2097.85	157994	10.2843 ng/ml
Nortriptyline	5.711	3058	463.59	37.3	183.72	12017	10.1265 ng/ml

TS

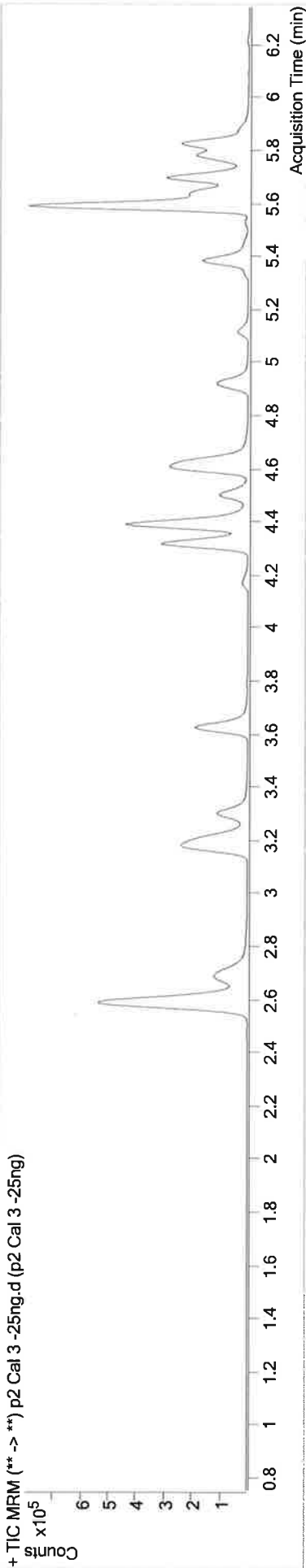


AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\P2_wkist 3107 TS_case samples.batch.bin
Calibration Last Update 3/26/2019 3:32:51 PM

Instrument FALCO-LCMS (Property ID 069901) **Data File** p2 Cal 3 -25ng.d
Type Cal **Sample** p2 Cal 3 -25ng
Acq. Method MDQ P2 Combined 111418.m **Operator** Tamara Salazar
Sample Position P2-C4 **Comment**
Injection Volume 10
Acq. Date-Time 3/21/2019 1:03:41 PM
Sample Info.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoflunitrazepam	4.635	246728	19108.17	24.8	10063.43	474740	26.1160 ng/ml
Amitriptyline	5.689	14264	619.35	40.5	305.07	11600	25.3747 ng/ml
Chlorpheniramine	5.118	90193	6643.07	0.3	70.50	33831	25.6656 ng/ml
Doxephin	5.376	7086	512.36	54.8	123.61	14437	22.7825 ng/ml
Etizolam	5.816	104316	7741.31	25.4	1806.78	300989	26.8649 ng/ml
Flurazepam	5.338	30596	3207.93	13.4	311.06	19346	23.6131 ng/ml
Maprotiline	5.689	14264	619.35	35.2	109.24	11600	25.2778 ng/ml
Midazolam	5.775	26697	2048.45	88.3	2049.51	155828	26.6715 ng/ml
Nortriptyline	5.711	6777	922.83	38.2	232.37	10742	24.9949 ng/ml

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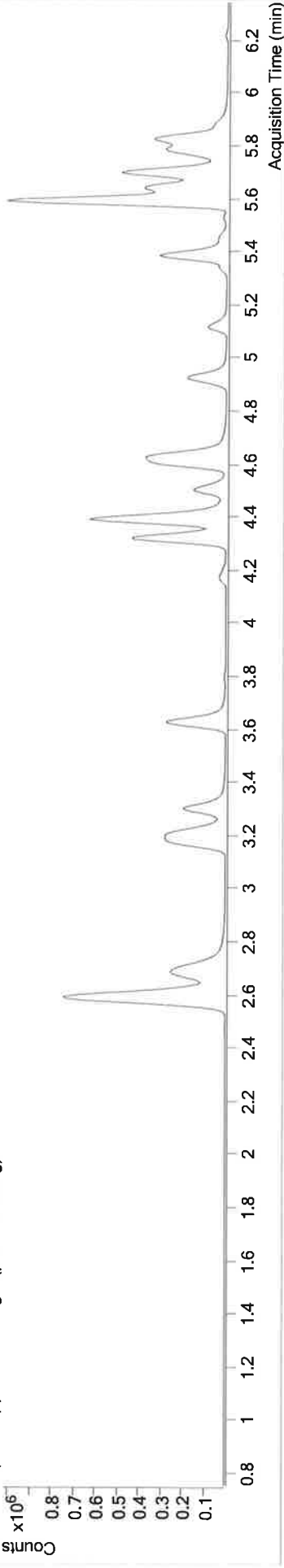
AM #28 Multi-Drug Quant. Results

Batch results Calibration Last Update D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\P2_wklist 3107 TS_case samples.batch.bin
3/26/2019 3:32:51 PM

Instrument Type FALCO-LCMS (Property ID 069901) **Data File** p2 Cal 4-50ng.d
Acq. Method Cal MDQ P2 Combined 111418.m **Sample Operator** p2 Cal 4-50ng
Injection Volume P2-D4 10 **Comment** Tamara Salazar
Acq. Date-Time 3/21/2019 1:14:15 PM

Sample Chromatogram

+ TIC MRM (** -> **) p2 Cal 4-50ng.d (p2 Cal 4-50ng)



Name	RT	Resp.	S/N	Ratio	ISTD Resp.	Final Conc.
7-aminoflunitrazepam	4.635	481109	49496.14	25.2	489220	50.4206 ng/ml
Amitriptyline	5.689	33409	4936.26	40.2	12894	53.8994 ng/ml
Chlorpheniramine	5.125	210691	13519.16	0.4	38139	52.1261 ng/ml
Doxepin	5.376	17269	1535.95	54.5	17173	46.6129 ng/ml
Etizolam	5.816	214341	20626.18	25.6	344727	50.1720 ng/ml
Flurazepam	5.338	69516	3003.60	13.2	21626	45.3961 ng/ml
Maprotiline	5.689	33409	4936.26	35.4	12894	54.4828 ng/ml
Methocarbamol	4.408	81475	5145.63	94.4	1179036	47.2041 ng/ml
Midazolam	5.775	63030	4843.92	90.4	185828	53.5833 ng/ml
Nortriptyline	5.711	15156	2738.63	36.5	11926	50.2720 ng/ml

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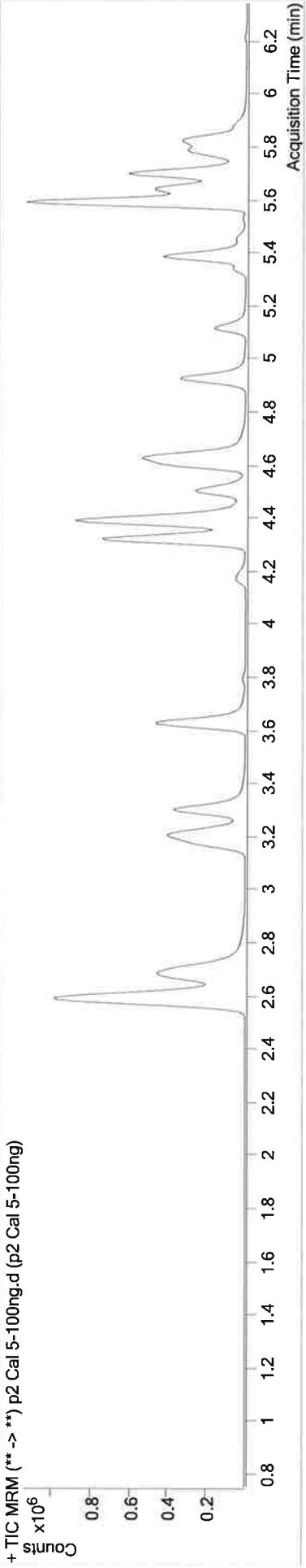


AM #28 Multi-Drug Quant. Results

Batch results Calibration Last Update D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\P2 wk1st 3107 TS_case samples.batch.bin
3/26/2019 3:32:51 PM

Instrument FALCO-LCMS (Property ID 069901) **Data File** p2 Cal 5-100ng.d
Type Cal **Sample** p2 Cal 5-100ng
Acq. Method MDQ P2 Combined 111418.m **Operator** Tamara Salazar
Sample Position P2-E4
Injection Volume 10
Acq. Date-Time 3/21/2019 1:24:49 PM
Sample Info.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoflunitrazepam	4.635	828673	26649.82	25.1	41430.28	461240	93.0433 ng/ml
Amitriptyline	5.689	53526	760.02	40.0	723.27	10537	106.0434 ng/ml
Chlorpheniramine	5.118	389727	1668.76	0.3	∞	30705	118.4876 ng/ml
Doxepin	5.376	29145	3719.58	49.3	1248.48	14033	96.2072 ng/ml
Etizolam	5.816	306595	8035.73	25.7	5674.75	246486	102.8594 ng/ml
Flurazepam	5.338	134428	2831.14	13.5	1372.73	17536	104.7785 ng/ml
Maprotiline	5.689	53526	760.02	32.3	810.63	10537	107.8705 ng/ml
Methocarbamol	4.414	112986	19009.04	94.6	2373.83	1041510	111.1496 ng/ml
Midazolam	5.775	97536	3206.62	90.6	1566.55	148599	104.4352 ng/ml
Nortriptyline	5.711	21828	4734.24	38.6	580.28	8658	99.6574 ng/ml

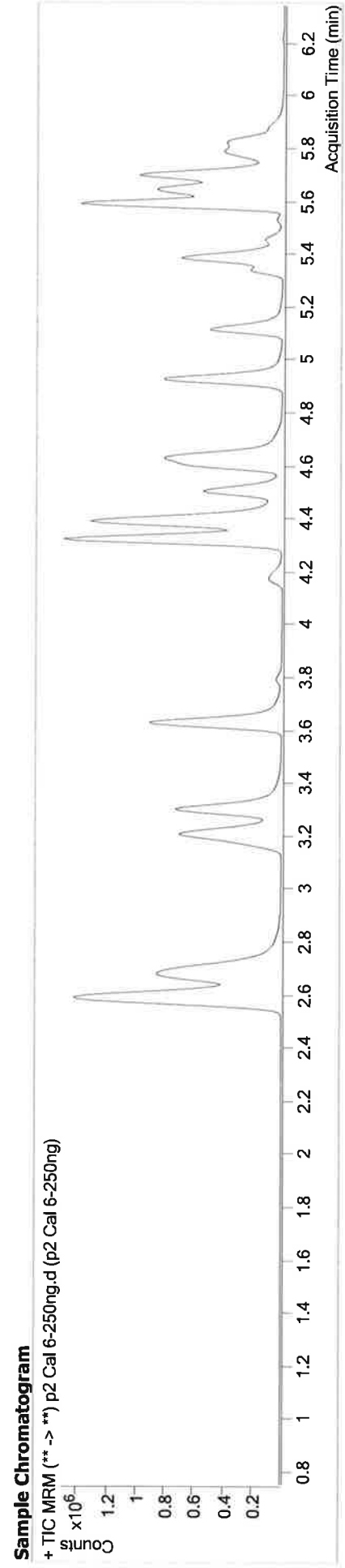
TS



AM #28 Multi-Drug Quant. Results

Batch results Calibration Last Update D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\P2_wk1st 3107 TS_case samples.batch.bin
3/26/2019 3:32:51 PM

Instrument FALCO-LCMS (Property ID 069901) **Data File** p2 Cal 6-250ng.d
Type Cal **Sample** p2 Cal 6-250ng
Acq. Method MDQ P2 Combined 111418.m **Operator** Tamara Salazar
Sample Position P2-F4
Injection Volume 10
Acq. Date-Time 3/21/2019 1:35:23 PM
Sample Info.



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoflunitrazepam	4.635	1485444	39245.58	25.4	15880.32	432306	178.9738 ng/ml
Amitriptyline	5.689	232687	4173.96	41.3	1274.20	19197	253.5728 ng/ml
Chlorpheniramine	5.118	1236326	∞	0.4	462.41	50260	228.7091 ng/ml
Doxepin	5.376	121569	∞	50.3	920.95	21081	267.0433 ng/ml
Etizolam	5.816	480351	6888.58	25.4	8839.45	163966	245.6281 ng/ml
Flurazepam	5.338	450636	69066.45	13.8	22066.81	37534	162.6745 ng/ml
Maprotiline	5.689	232687	4173.96	30.5	3215.52	19197	258.9183 ng/ml
Methocarbamol	4.414	164328	1547.23	94.8	5046.20	814487	262.6110 ng/ml
Midazolam	5.775	199519	1613.73	88.2	12923.24	129887	245.4733 ng/ml
Nortriptyline	5.718	99303	20012.32	38.4	11416.72	15553	252.2691 ng/ml

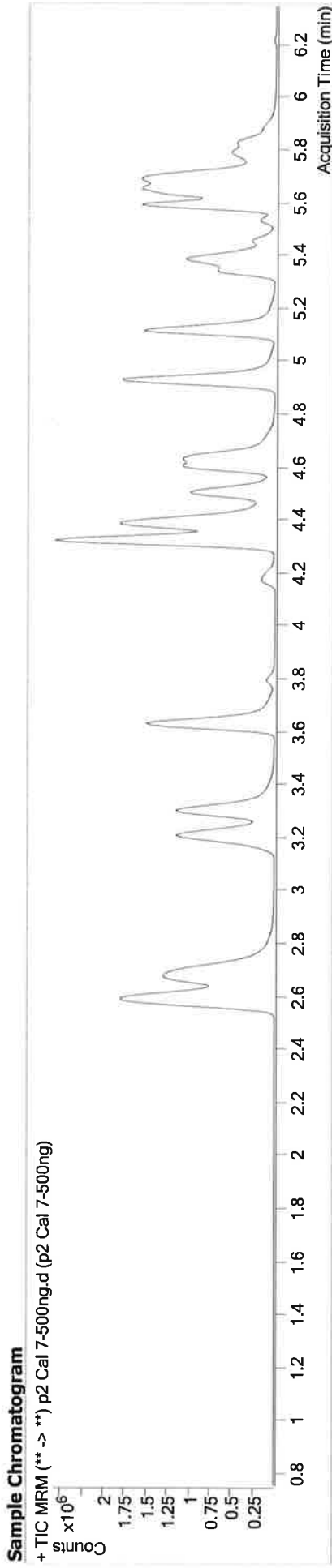
5



AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\P2 wklist 3107 TS_case samples.batch.bin
Calibration Last Update 3/26/2019 3:32:51 PM

Instrument FALCO-LCMS (Property ID 069901) **Data File** p2 Cal 7-500ng.d
Type Cal **Sample** p2 Cal 7-500ng
Acq. Method MDQ P2 Combined 111418.m **Operator** Tamara Salazar
Sample Position P2-G4
Injection Volume 10
Acq. Date-Time 3/21/2019 1:45:57 PM
Sample Info.



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoflunitrazepam	4.635	2056151	41926.77	25.3	22819.69	365736	293.5426 ng/ml
Amitriptyline	5.689	936594	38227.90	45.2	17168.38	41804	469.0485 ng/ml
Chlorpheniramine	5.118	4112911	∞	0.4	753.58	88902	429.2749 ng/ml
Doxepin	5.376	501367	28116.49	50.3	21149.04	46686	497.2452 ng/ml
Etizolam	5.816	626101	∞	25.4	9338.49	72707	726.8313 ng/ml
Flurazepam	5.338	1469827	∞	14.0	14118.56	121111	164.4096 ng/ml
Maprotiline	5.689	936594	38227.90	26.8	13956.77	41804	479.5331 ng/ml
Methocarbamol	4.421	195447	26312.07	93.0	∞	611708	453.8209 ng/ml
Midazolam	5.775	329257	∞	92.9	∞	125175	420.9109 ng/ml
Nortriptyline	5.718	448365	107307.26	38.8	35720.92	35021	505.7872 ng/ml

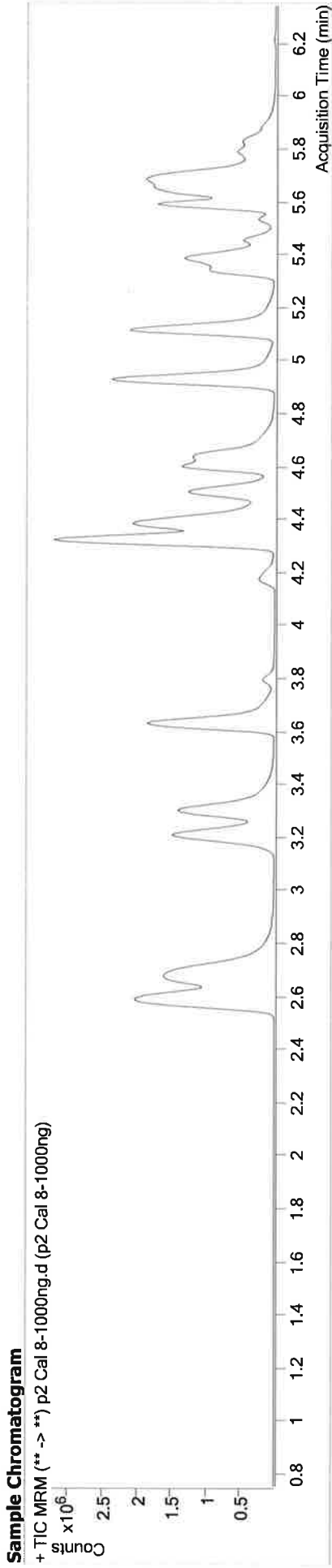
TS



AM #28 Multi-Drug Quant. Results

Batch results D:\MassHunter\Data\2019\AM 28\032119 MDQ P1_P2_Urine Val TS\QuantResults\P2_wklist 3107 TS_case samples.batch.bin
Calibration Last Update 3/26/2019 3:32:51 PM

Instrument FALCO-LCMS (Property ID 069901) **Data File** p2 Cal 8-1000ng.d
Type Cal **Sample** p2 Cal 8-1000ng
Acq. Method MDQ P2 Combined 111418.m **Operator** Tamara Salazar
Sample Position P2-H4
Injection Volume 10
Acq. Date-Time 3/21/2019 1:56:30 PM
Sample Info.



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-aminoflunitrazepam	4.635	2655361	48598.84	25.3	22505.90	289078	480.3267 ng/ml
Amitriptyline	5.683	1200733	46532.47	46.1	32758.60	27781	905.2252 ng/ml
Chlorpheniramine	5.118	6181535	∞	0.4	707.19	53495	1070.7378 ng/ml
Doxepin	5.376	698658	38161.78	50.7	19055.86	32547	993.8826 ng/ml
Etizolam	5.816	782078	∞	25.2	804.69	41223	1604.2921 ng/ml
Flurazepam	5.338	2198507	68053.12	13.9	83772.81	101211	292.2811 ng/ml
Maprotiline	5.683	1200733	46532.47	20.8 Low	14015.85	27781	926.1126 ng/ml
Methocarbamol	4.421	251987	93.97	90.6	∞	389200	986.3361 ng/ml
Midazolam	5.775	393359	4552.83	97.2	7608.38	90014	699.8019 ng/ml
Nortriptyline	5.718	568201	58891.97	39.2	16222.44	22626	992.0286 ng/ml