









APPROVED

By Anne Nord at 10:47 am, Sep 13, 2019

9/4/2019

cg

Worklist: 3652

<u>LAB_CASE</u>	<u>ITEM</u>	<u>TASK_ID</u>	<u>DESCRIPTION</u>	
C2019-1550	3	162311	AM 13 Urine LCMS-QQQ Benzodiazepines and ;	
M2019-3369	7	162302	AM 13 Urine LCMS-QQQ Benzodiazepines and ;	
M2019-3613	4	162304	AM 13 Urine LCMS-QQQ Benzodiazepines and ;	
M2019-3642	3	162312	AM 13 Urine LCMS-QQQ Benzodiazepines and ;	
M2019-3816	3	162306	AM 13 Urine LCMS-QQQ Benzodiazepines and ;	
P2019-2338	1	162313	AM 13 Urine LCMS-QQQ Benzodiazepines and ;	
P2019-2516	1	162314	AM 13 Urine LCMS-QQQ Benzodiazepines and ;	
P2019-2530	1	162315	AM 13 Urine LCMS-QQQ Benzodiazepines and ;	

AM 13: Benzo and Z-Drugs LCMS Urine Extraction

Extraction Date: 09/04/2019
Negative Blood/Urine Lot: POC031319
Positive Control Working Solution Lot: WS013119
Calibrator Working Solution Lot #'s: WS021319
Oxazepam Glucuronide Lot: Alltech 715-5035
LC Column: Agilent Poroshell 120 EC-C18 (2.1x75mm; 2.7 Micron)

Analyst: Celena Shrum
LCMS-QQQ ID: Falco
b-glucuronidase Lot: Kura 4150

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. Prep Non-Extracted Calibrators:

Level	ng/mL	Working Solution (ng/μL)	Volume to add (μL)
Blank	-	-	-
1	10	1	10
2	25	1	25
3	50	1	50
4	100	1	100
5	500	10	50
6	1000	10	100
7	3000 (Urine)	10	300

Analytic:

- 1. Remove working solutions, external control, negative urine and case samples from cold storage.
- 2. **Blood:** Add 1mL samples, and controls to Extraction tube. **Urine:** To each labeled round bottomed tube add 1mL sample, using negative blood or urine sample for both negative and positive control. Positive control: spike negative blood or urine with 300uL positive control working solution. Urine Required additional glucuronide positive and negative controls.
- 3. To all samples: add 100uL Internal Standard Working Solution.
- 4. For Urine Only: Glucuronide Cleaving:
 - 4.1. Add 20uL of 2M Acetate buffer to all urine samples, Vortex.
 - 4.2. To all but negative glucuronide control: add 76uL Kura b-glucuronidase. Cap and gently rock.
 - 4.3. Place in oven at ~60C for approx. 30 minutes.
- 5. Add 4mL water to all extraction tubes. Urine Samples: Transfer into the extraction tubes.
- 6. Place on tube rocker at ambient temp for ~ 10 minutes.
- 7. Centrifuge for ~ 10 min at ~2500rpm.
Optional: To break up emulsions: re-centrifuge at ~3000rpm for ~5 minutes
- 8. Transfer solvent to tapered bottom tube and evaporate to dryness under nitrogen @ 37C.
- 9. Reconstitute with 100uL of 9:1 mobile phase A:B
- 10. Transfer to labeled ALS vial with insert.
- 11. Run using appropriate LCMS Instrument Acquisition.

Post-Analytic

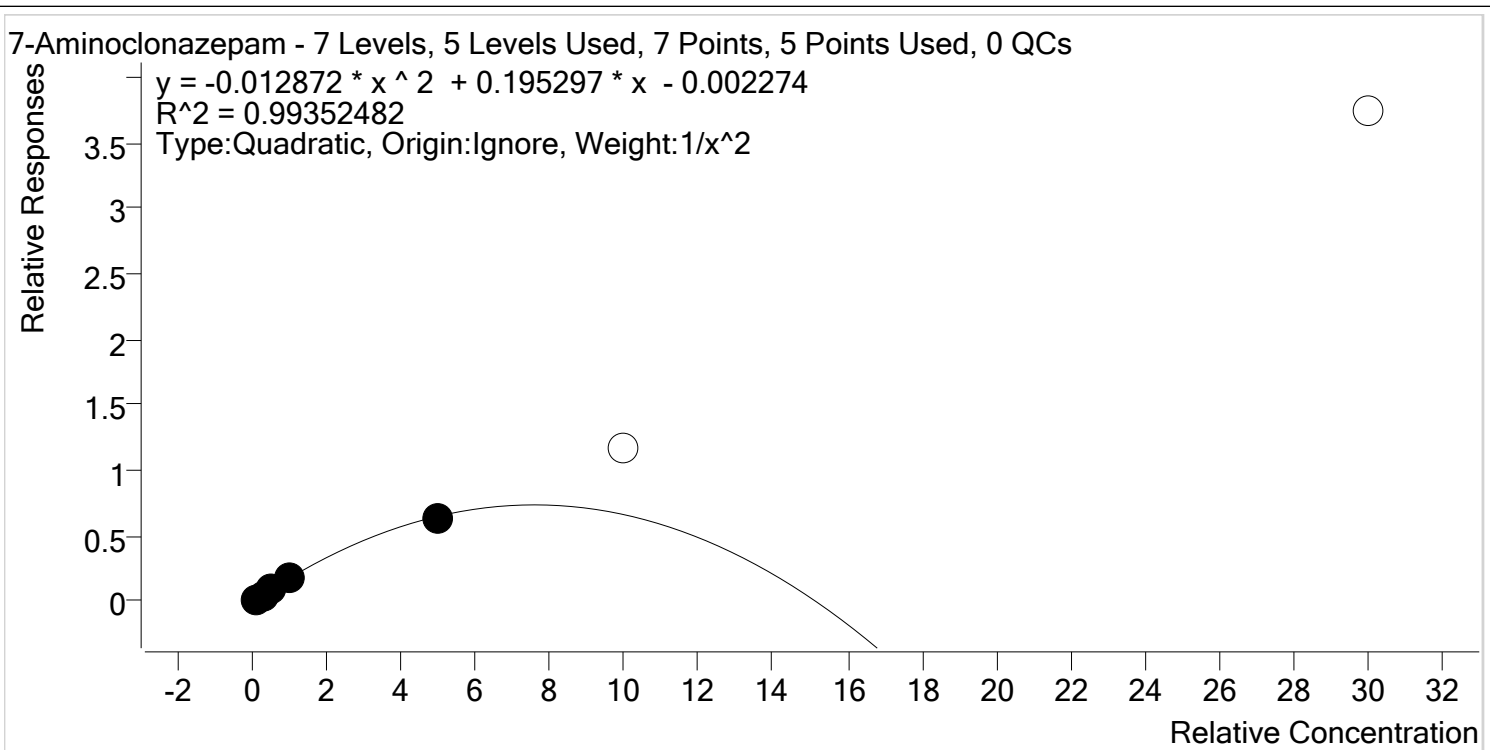
- 1. Complete Data Analysis on all samples and corresponding sample blanks
 LCMS Data Path: C:\MassHunter\Data\2019\AM 13\AM 13 Worklist 3652 CS\QuantResults\am 13 worklist 3652
- 2. Did positive and negative control samples provide intended response? Y / N
- 3. RT within +/-5% of Calibrators; Ion Ratios within +/- 20% of the calibrator average for the run.
- 4. Central File Packet to include: LIMS Worklist, Method Checklist, Working solution prep sheet, and Control sample LCMS data printouts.

Comments: No samples can be called inconclusive for zopiclone for this run.



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte 7-Aminoclonazepam **Internal Standard** 7-Aminoflunitrazepam-D7 ISTD

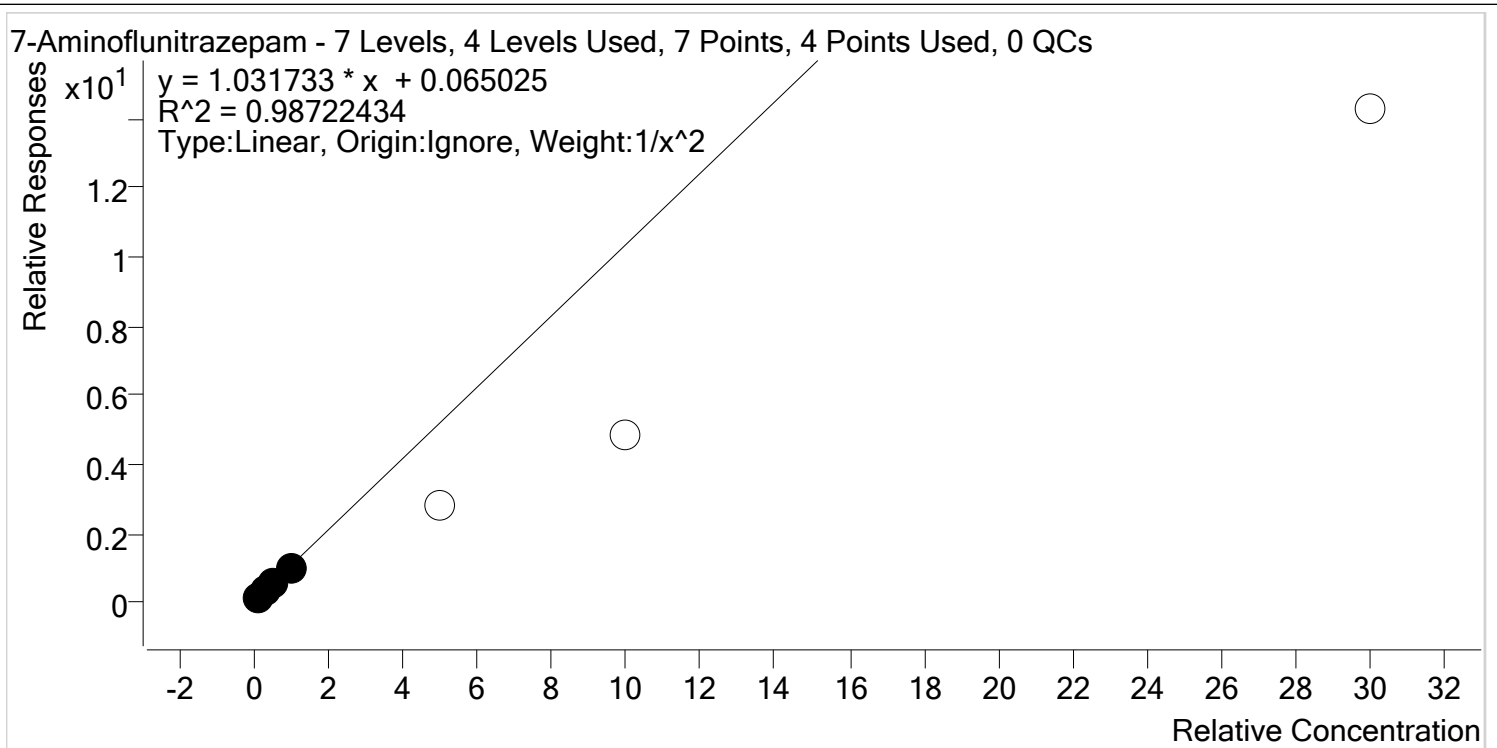


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	10.3	102.6
Cal 2- 25ng	2	✓	25.0	22.6	90.4
Cal 3 -50ng	3	✓	50.0	52.1	104.3
Cal 4-100ng	4	✓	100.0	103.9	103.9
Cal 5-500ng	5	✓	500.0	490.5	98.1
Cal 6-1000ng	6	✗	1000.0	ND	
Cal 7-3000ng	7	✗	3000.0	ND	



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte 7-Aminoflunitrazepam **Internal Standard** 7-Aminoflunitrazepam-D7 ISTD

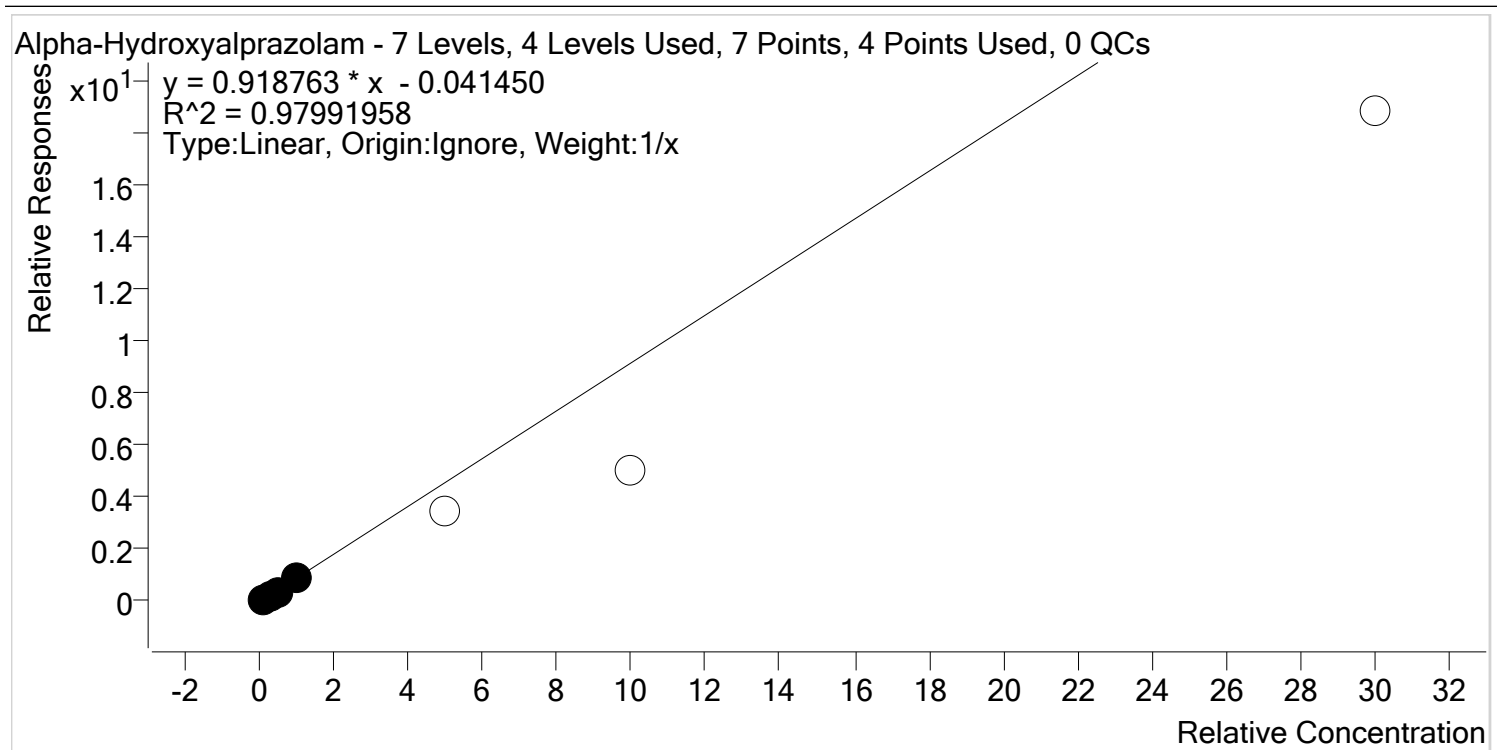


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	9.6	96.3
Cal 2- 25ng	2	✓	25.0	27.6	110.3
Cal 3 -50ng	3	✓	50.0	51.3	102.5
Cal 4-100ng	4	✓	100.0	90.9	90.9
Cal 5-500ng	5	x	500.0	268.9	53.8
Cal 6-1000ng	6	x	1000.0	460.6	46.1
Cal 7-3000ng	7	x	3000.0	1378.2	45.9



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Alpha-Hydroxyalprazolam **Internal Standard** Alphahydroxyalprazolam-D5 ISTD



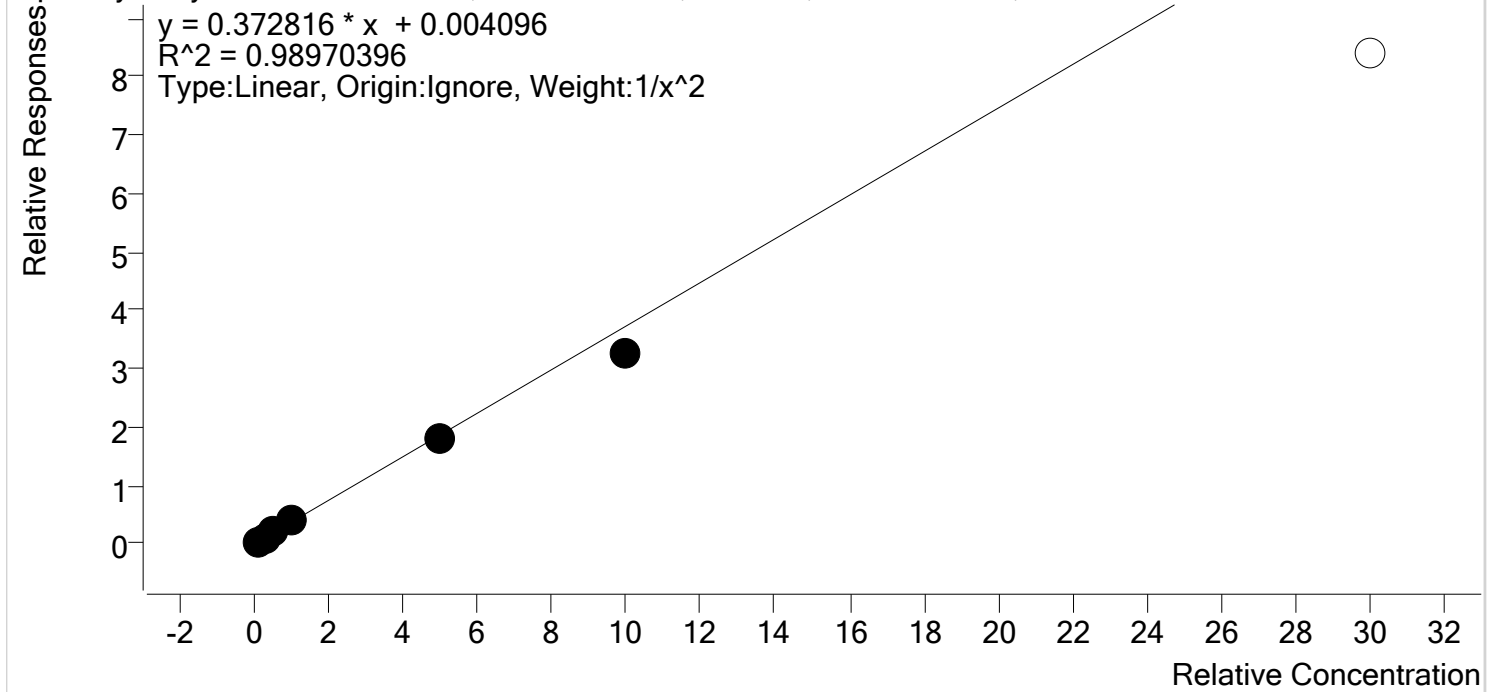
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	11.4	113.7
Cal 2- 25ng	2	✓	25.0	23.2	93.0
Cal 3 -50ng	3	✓	50.0	42.9	85.9
Cal 4-100ng	4	✓	100.0	107.4	107.4
Cal 5-500ng	5	✗	500.0	381.6	76.3
Cal 6-1000ng	6	✗	1000.0	550.4	55.0
Cal 7-3000ng	7	✗	3000.0	2051.0	68.4



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Alpha-hydroxytriazolam **Internal Standard** Nordiazepam-D5 ISTD

Alpha-hydroxytriazolam - 7 Levels, 6 Levels Used, 7 Points, 6 Points Used, 0 QCs

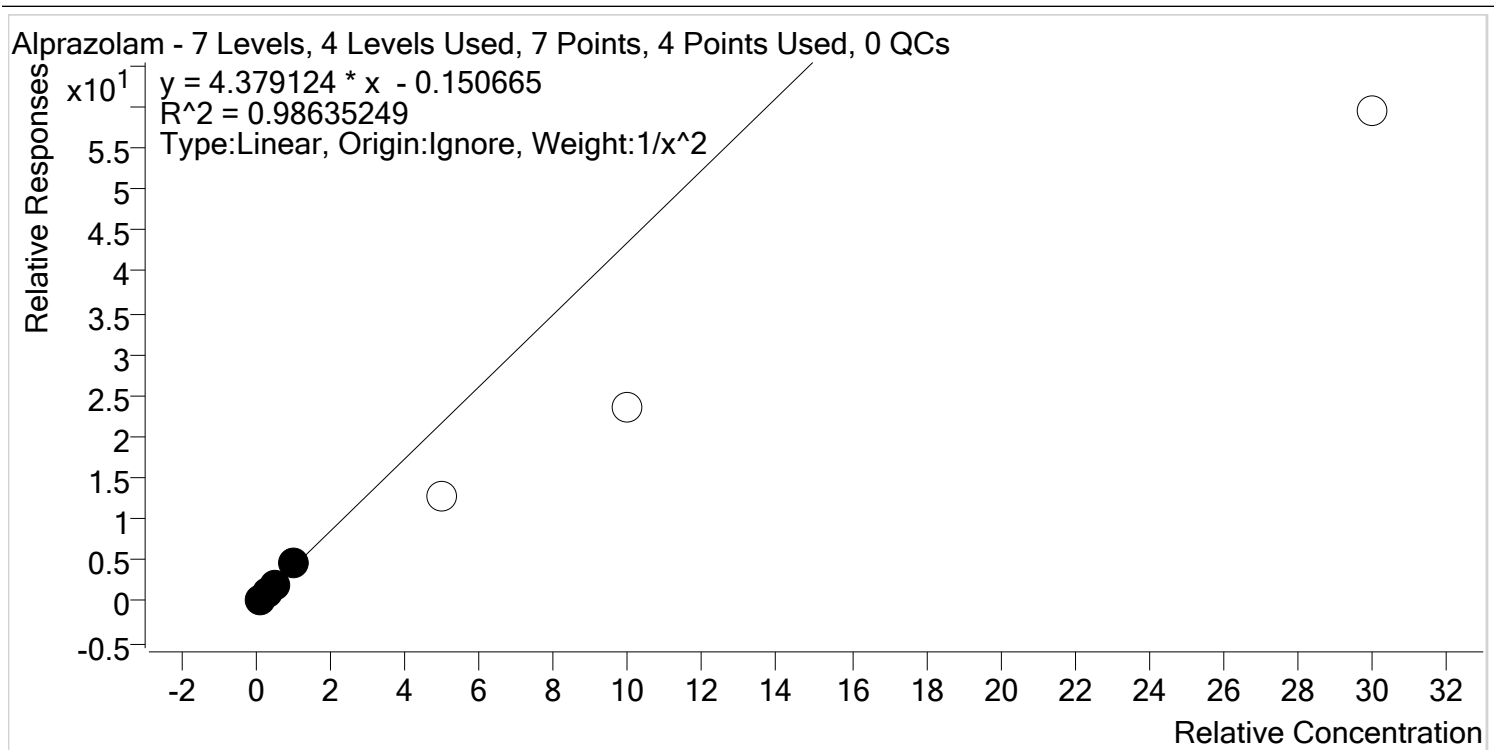


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	9.7	96.6
Cal 2- 25ng	2	✓	25.0	25.9	103.8
Cal 3 -50ng	3	✓	50.0	52.3	104.6
Cal 4-100ng	4	✓	100.0	111.9	111.9
Cal 5-500ng	5	✓	500.0	478.2	95.6
Cal 6-1000ng	6	✓	1000.0	874.3	87.4
Cal 7-3000ng	7	x	3000.0	2250.2	75.0



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Alprazolam **Internal Standard** Alphahydroxyalprazolam-D5 ISTD



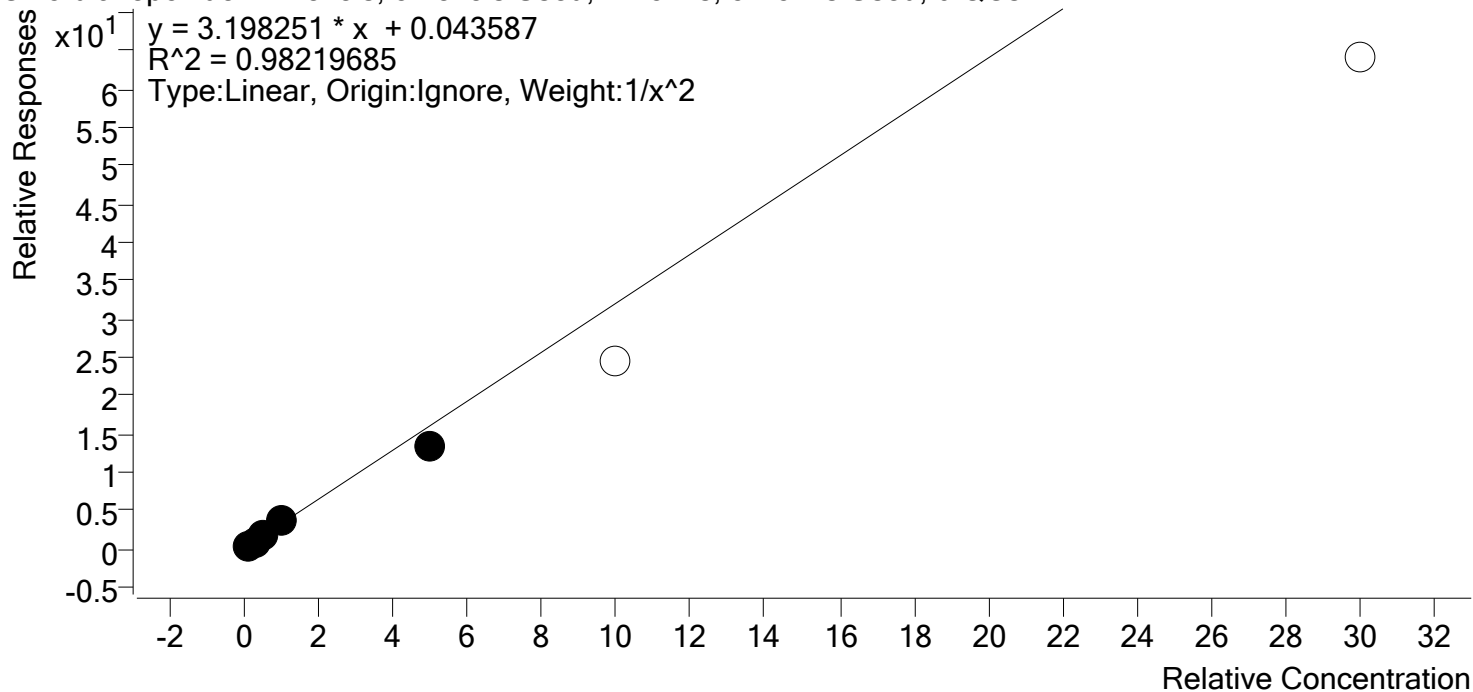
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	10.2	101.6
Cal 2- 25ng	2	✓	25.0	24.7	98.8
Cal 3 -50ng	3	✓	50.0	44.7	89.4
Cal 4-100ng	4	✓	100.0	110.3	110.3
Cal 5-500ng	5	✗	500.0	299.8	60.0
Cal 6-1000ng	6	✗	1000.0	540.2	54.0
Cal 7-3000ng	7	✗	3000.0	1361.0	45.4



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Chlordiazepoxide **Internal Standard** Nordiazepam-D5 ISTD

Chlordiazepoxide - 7 Levels, 5 Levels Used, 7 Points, 5 Points Used, 0 QCs



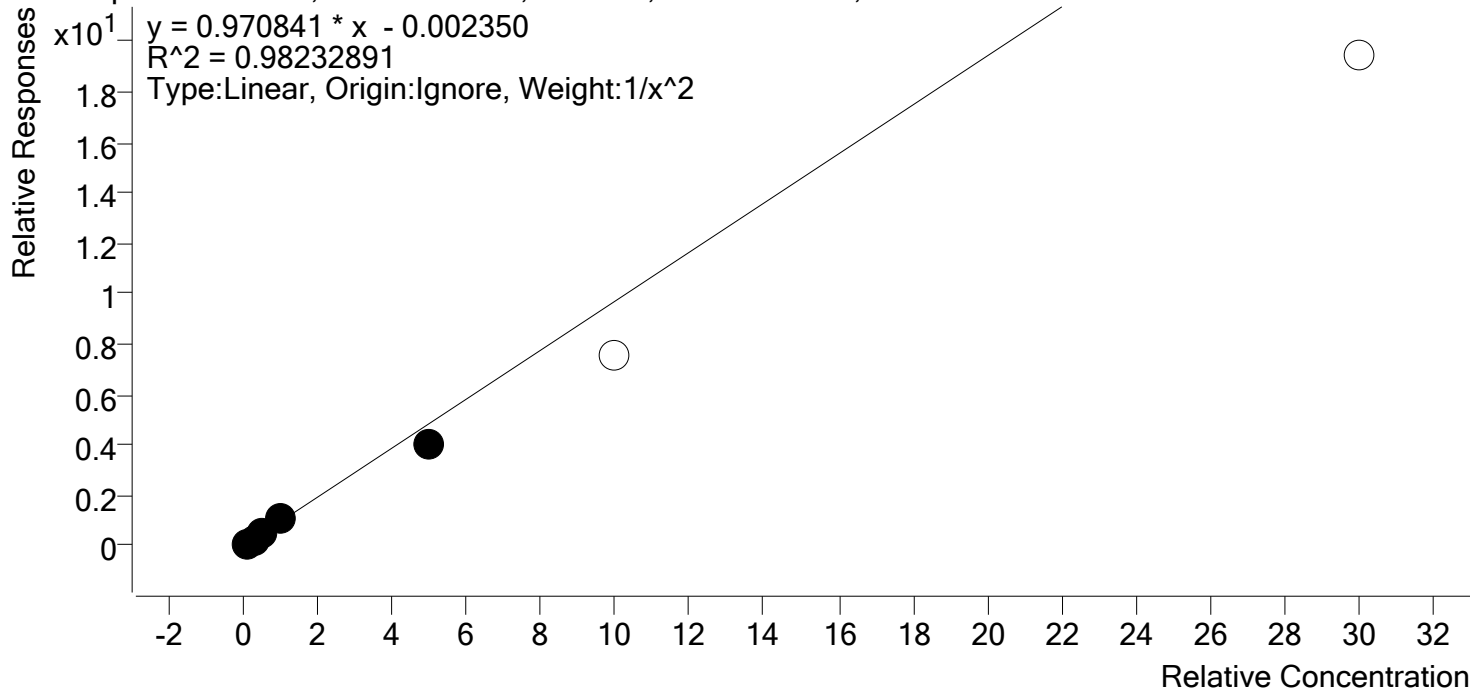
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	9.5	95.4
Cal 2- 25ng	2	✓	25.0	26.7	107.0
Cal 3 -50ng	3	✓	50.0	53.7	107.3
Cal 4-100ng	4	✓	100.0	107.3	107.3
Cal 5-500ng	5	✓	500.0	415.4	83.1
Cal 6-1000ng	6	✗	1000.0	762.7	76.3
Cal 7-3000ng	7	✗	3000.0	2001.8	66.7



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Clonazepam **Internal Standard** Clonazepam-D4 ISTD

Clonazepam - 7 Levels, 5 Levels Used, 7 Points, 5 Points Used, 0 QCs



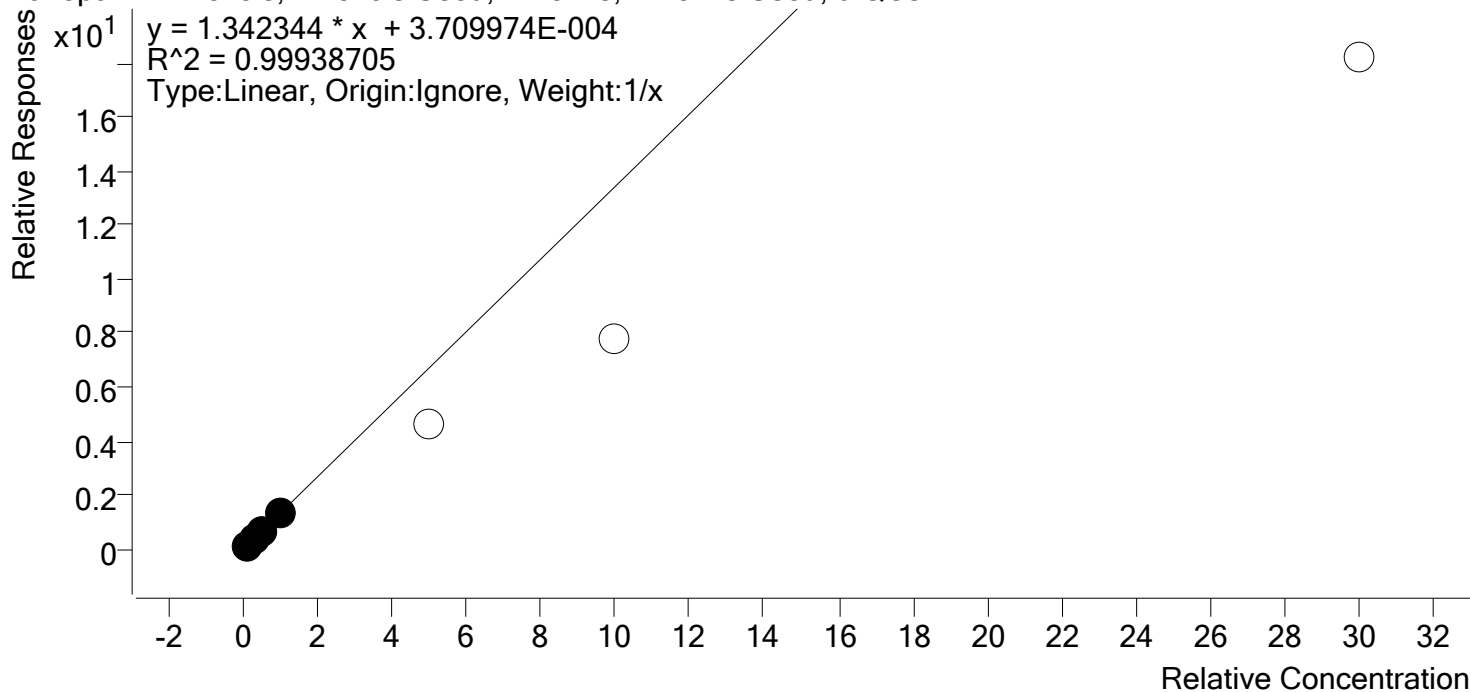
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	9.6	95.6
Cal 2- 25ng	2	✓	25.0	26.7	107.0
Cal 3 -50ng	3	✓	50.0	52.8	105.6
Cal 4-100ng	4	✓	100.0	108.7	108.7
Cal 5-500ng	5	✓	500.0	415.7	83.1
Cal 6-1000ng	6	✗	1000.0	773.1	77.3
Cal 7-3000ng	7	✗	3000.0	2001.5	66.7



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Diazepam **Internal Standard** Diazepam-D5 ISTD

Diazepam - 7 Levels, 4 Levels Used, 7 Points, 4 Points Used, 0 QCs



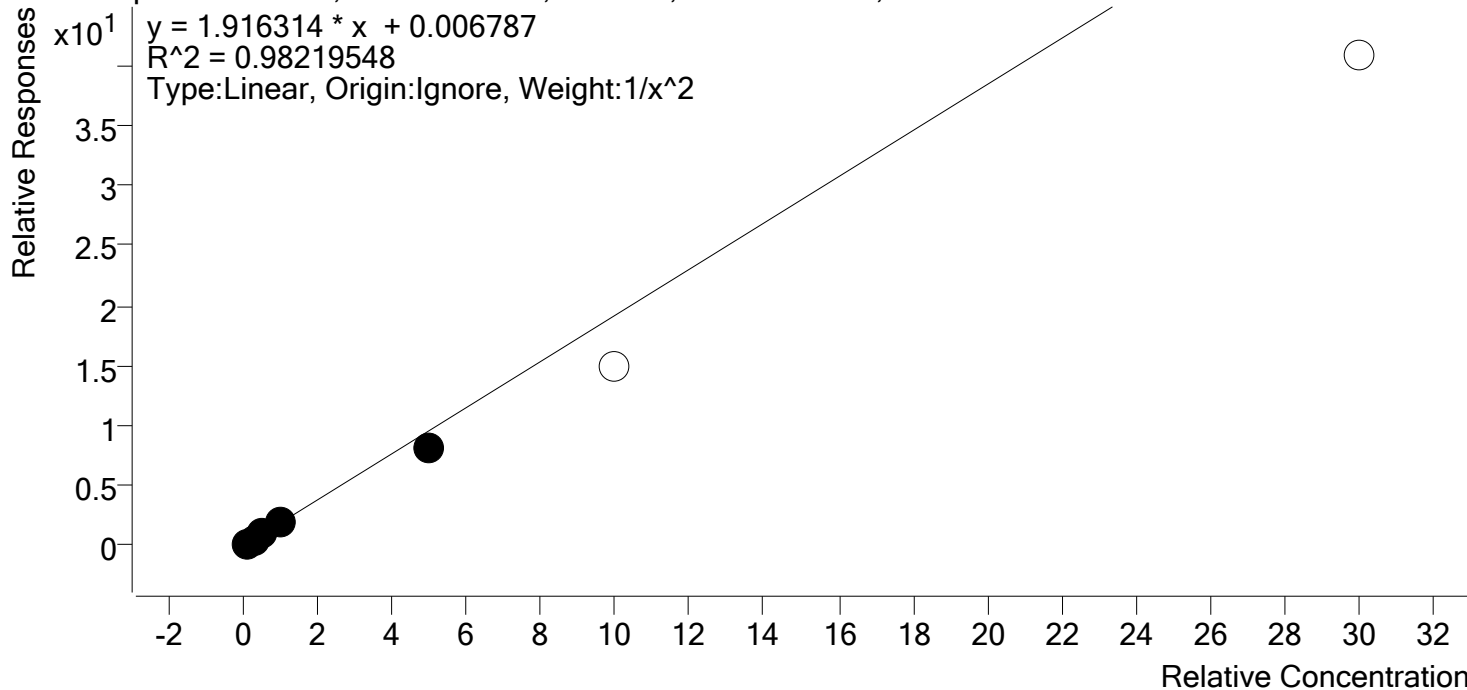
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	9.7	96.7
Cal 2- 25ng	2	✓	25.0	25.8	103.1
Cal 3 -50ng	3	✓	50.0	50.6	101.3
Cal 4-100ng	4	✓	100.0	98.9	98.9
Cal 5-500ng	5	✗	500.0	347.7	69.5
Cal 6-1000ng	6	✗	1000.0	576.3	57.6
Cal 7-3000ng	7	✗	3000.0	1355.0	45.2



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Flunitrazepam **Internal Standard** Clonazepam-D4 ISTD

Flunitrazepam - 7 Levels, 5 Levels Used, 7 Points, 5 Points Used, 0 QCs



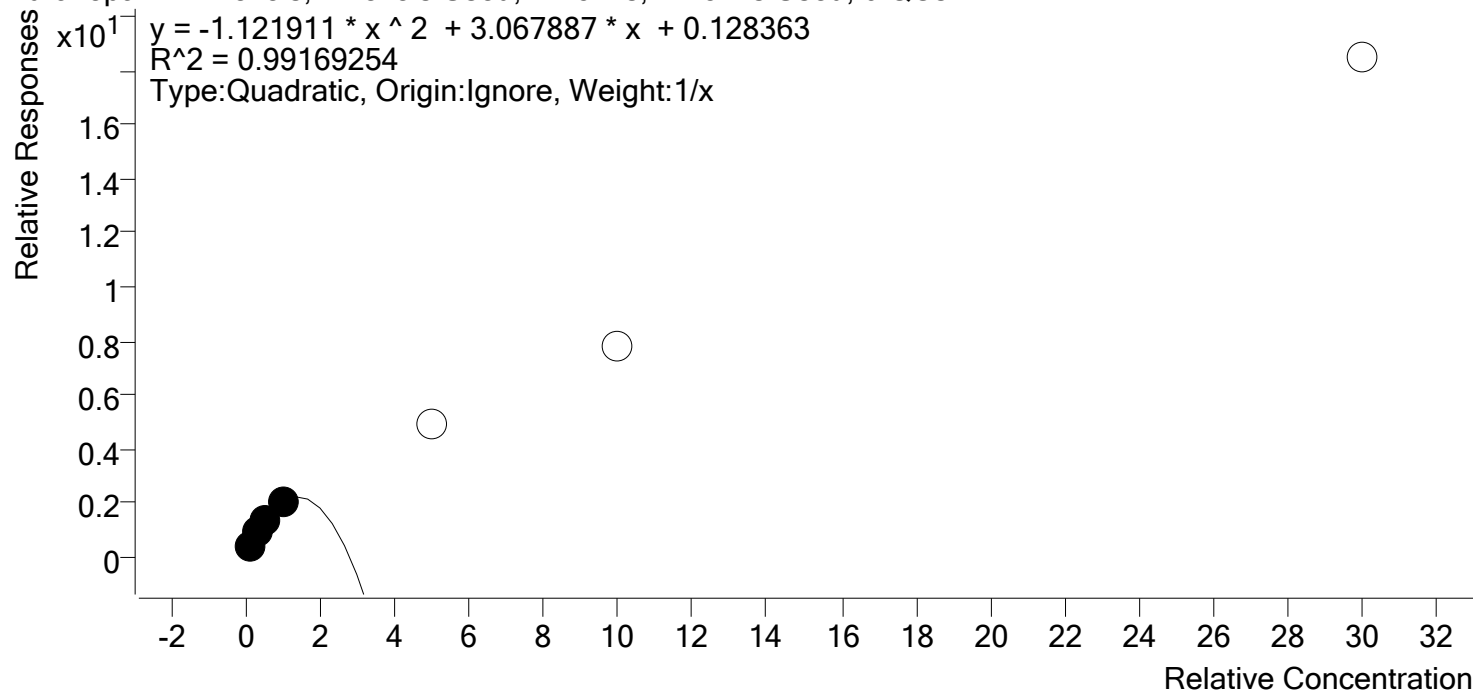
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	9.5	95.2
Cal 2- 25ng	2	✓	25.0	27.1	108.4
Cal 3 -50ng	3	✓	50.0	52.4	104.9
Cal 4-100ng	4	✓	100.0	108.2	108.2
Cal 5-500ng	5	✓	500.0	416.6	83.3
Cal 6-1000ng	6	x	1000.0	780.5	78.0
Cal 7-3000ng	7	x	3000.0	2125.4	70.8



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Flurazepam **Internal Standard** Diazepam-D5 ISTD

Flurazepam - 7 Levels, 4 Levels Used, 7 Points, 4 Points Used, 0 QCs



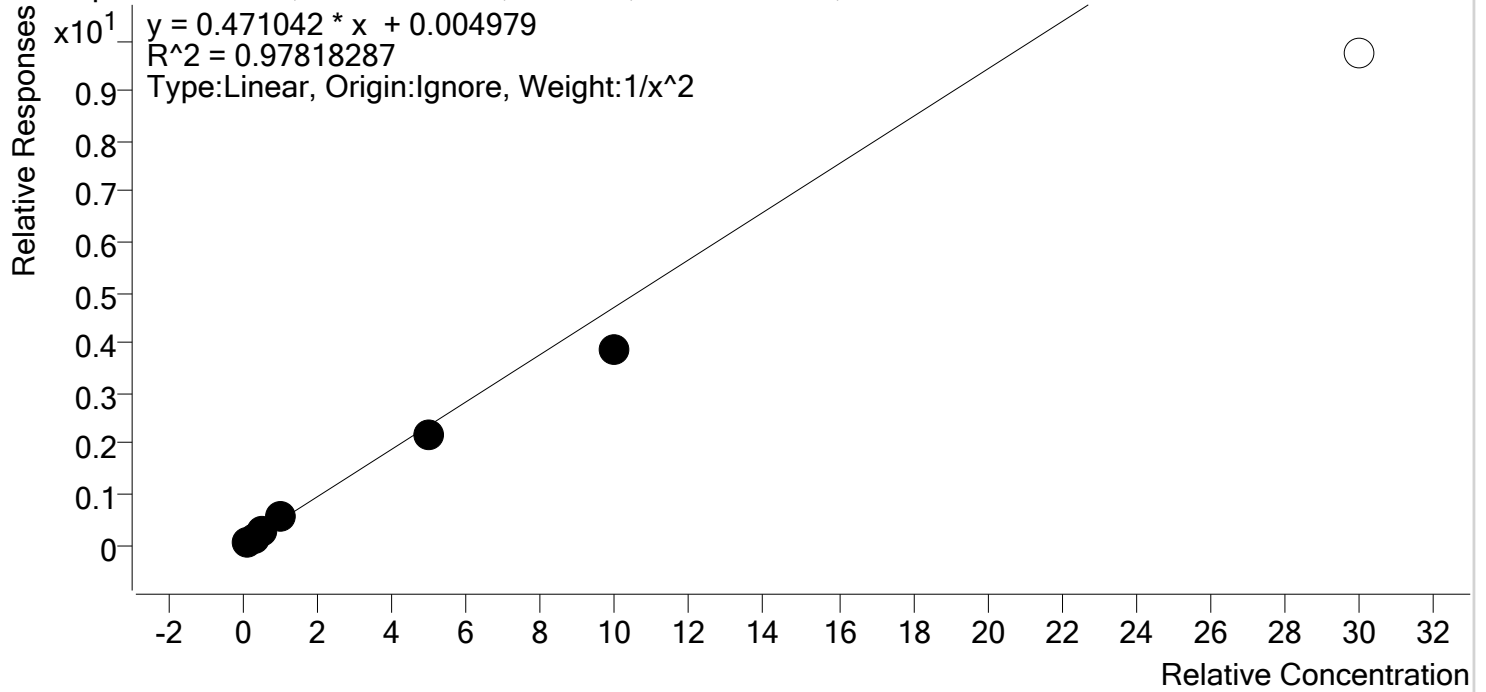
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	9.5	95.2
Cal 2- 25ng	2	✓	25.0	27.6	110.6
Cal 3 -50ng	3	✓	50.0	46.3	92.6
Cal 4-100ng	4	✓	100.0	102.8	102.8
Cal 5-500ng	5	✗	500.0	ND	
Cal 6-1000ng	6	✗	1000.0	ND	
Cal 7-3000ng	7	✗	3000.0	ND	

Compound Calibration Report



Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Lorazepam **Internal Standard** Nordiazepam-D5 ISTD

Lorazepam - 7 Levels, 6 Levels Used, 7 Points, 6 Points Used, 0 QCs



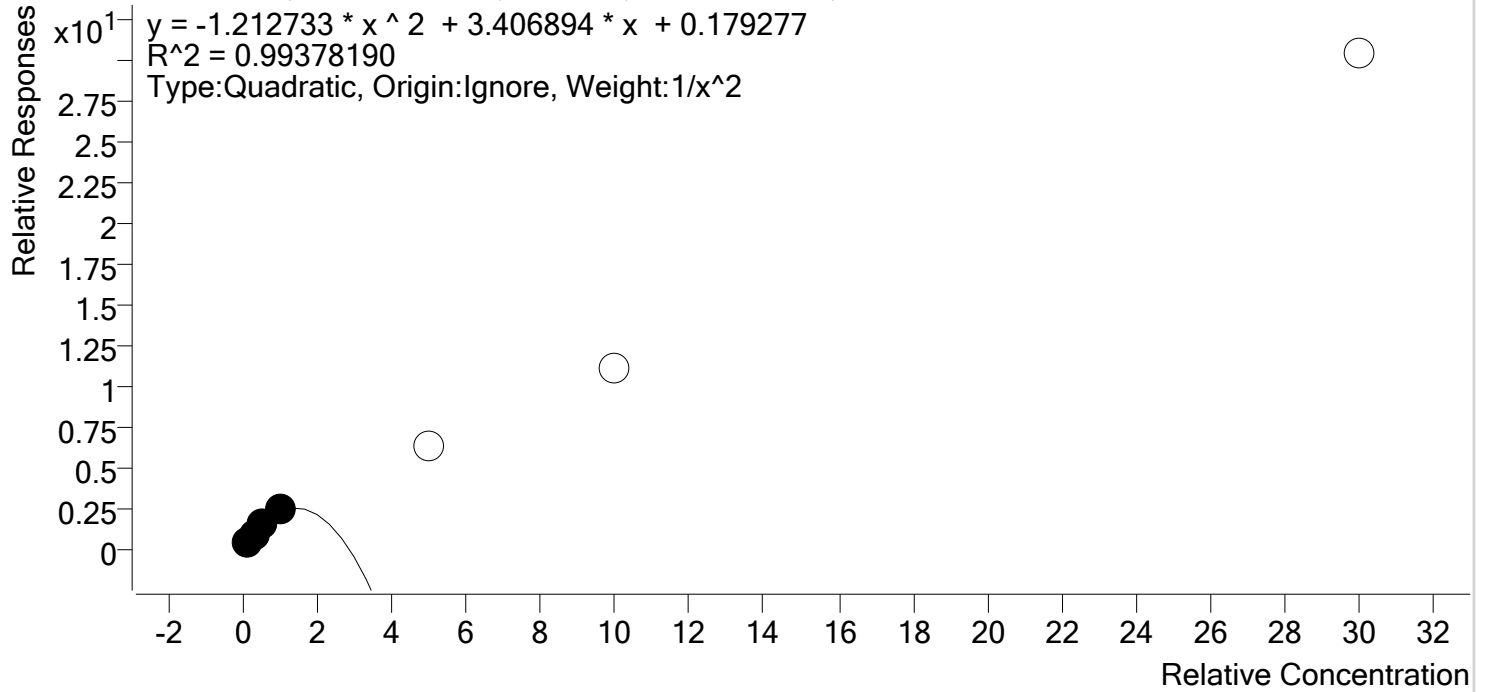
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	9.5	95.0
Cal 2- 25ng	2	✓	25.0	26.0	104.1
Cal 3 -50ng	3	✓	50.0	55.3	110.7
Cal 4-100ng	4	✓	100.0	116.1	116.1
Cal 5-500ng	5	✓	500.0	457.8	91.6
Cal 6-1000ng	6	✓	1000.0	826.4	82.6
Cal 7-3000ng	7	x	3000.0	2066.3	68.9



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Midazolam **Internal Standard** Clonazepam-D4 ISTD

Midazolam - 7 Levels, 4 Levels Used, 7 Points, 4 Points Used, 0 QCs



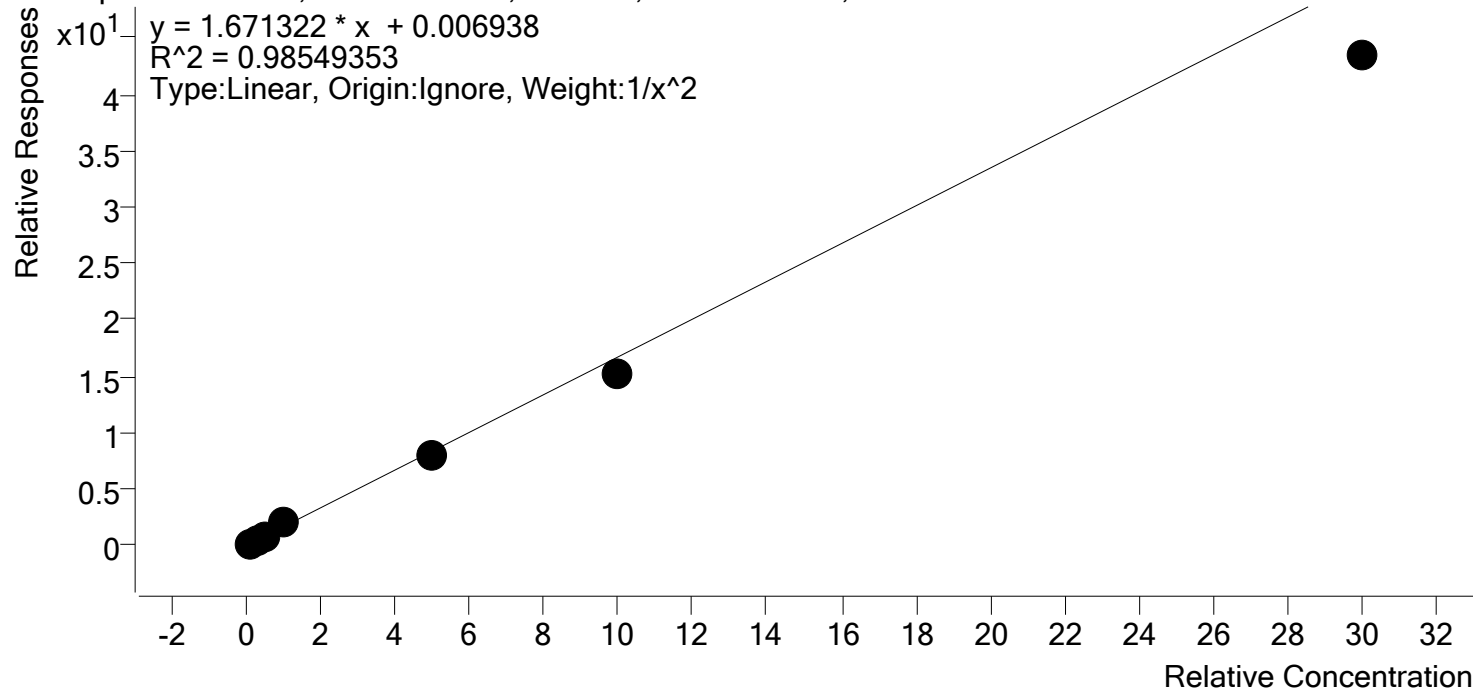
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	9.9	99.0
Cal 2- 25ng	2	✓	25.0	26.4	105.7
Cal 3 -50ng	3	✓	50.0	46.0	92.0
Cal 4-100ng	4	✓	100.0	105.8	105.8
Cal 5-500ng	5	✗	500.0	ND	
Cal 6-1000ng	6	✗	1000.0	ND	
Cal 7-3000ng	7	✗	3000.0	ND	



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Nitrazepam **Internal Standard** Clonazepam-D4 ISTD

Nitrazepam - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 0 QCs



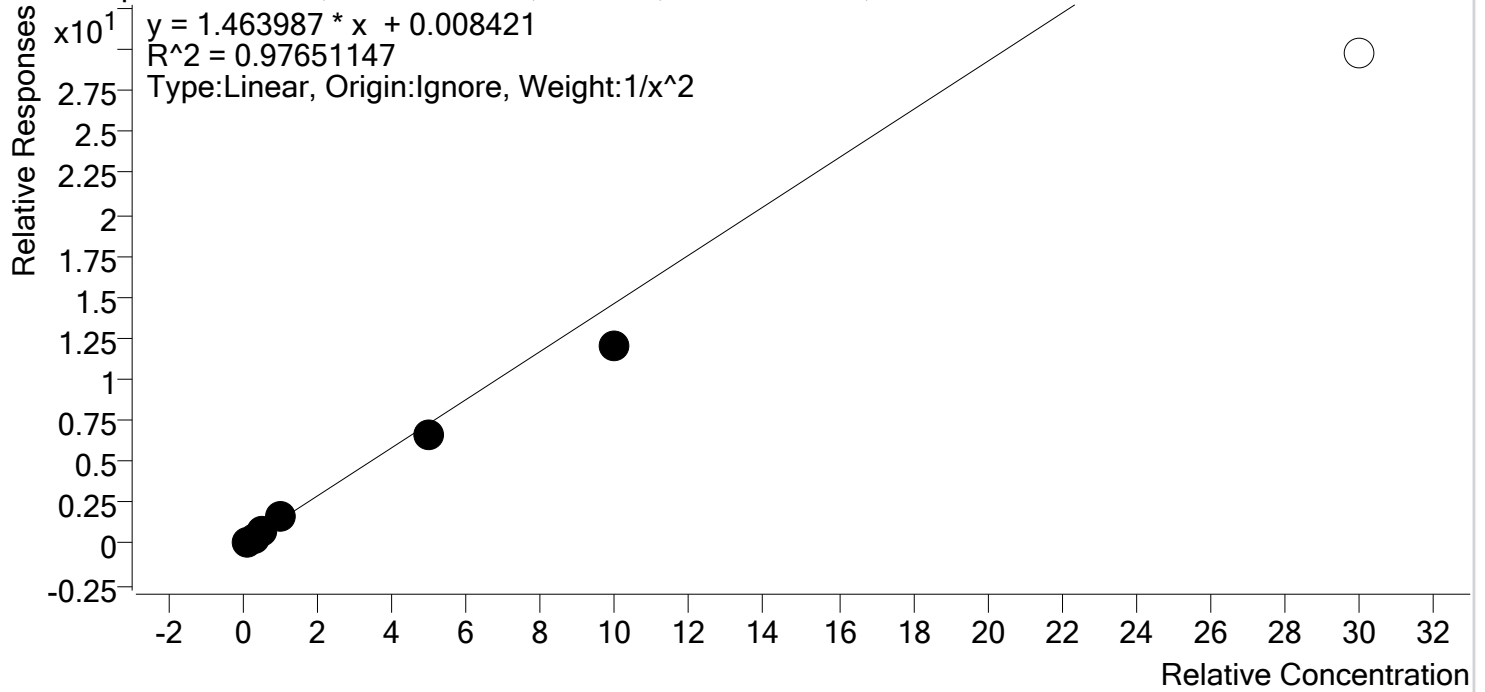
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	9.4	94.4
Cal 2- 25ng	2	✓	25.0	26.7	106.7
Cal 3 -50ng	3	✓	50.0	53.5	106.9
Cal 4-100ng	4	✓	100.0	116.8	116.8
Cal 5-500ng	5	✓	500.0	482.8	96.6
Cal 6-1000ng	6	✓	1000.0	919.7	92.0
Cal 7-3000ng	7	✓	3000.0	2596.3	86.5



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Nordiazepam **Internal Standard** Nordiazepam-D5 ISTD

Nordiazepam - 7 Levels, 6 Levels Used, 7 Points, 6 Points Used, 0 QCs



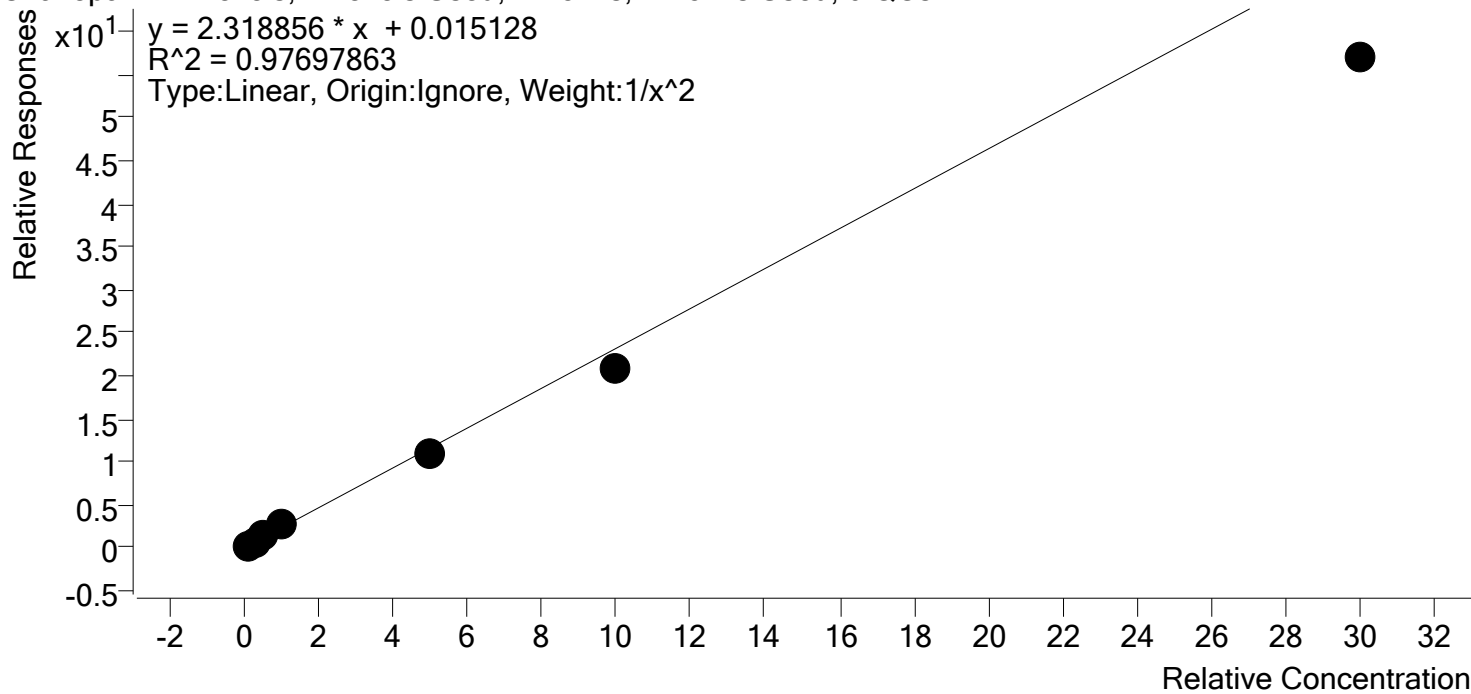
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	9.3	93.4
Cal 2- 25ng	2	✓	25.0	27.1	108.5
Cal 3 -50ng	3	✓	50.0	55.2	110.3
Cal 4-100ng	4	✓	100.0	114.6	114.6
Cal 5-500ng	5	✓	500.0	458.4	91.7
Cal 6-1000ng	6	✓	1000.0	814.6	81.5
Cal 7-3000ng	7	x	3000.0	2033.3	67.8



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Oxazepam **Internal Standard** Oxazepam-D5 ISTD

Oxazepam - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 0 QCs



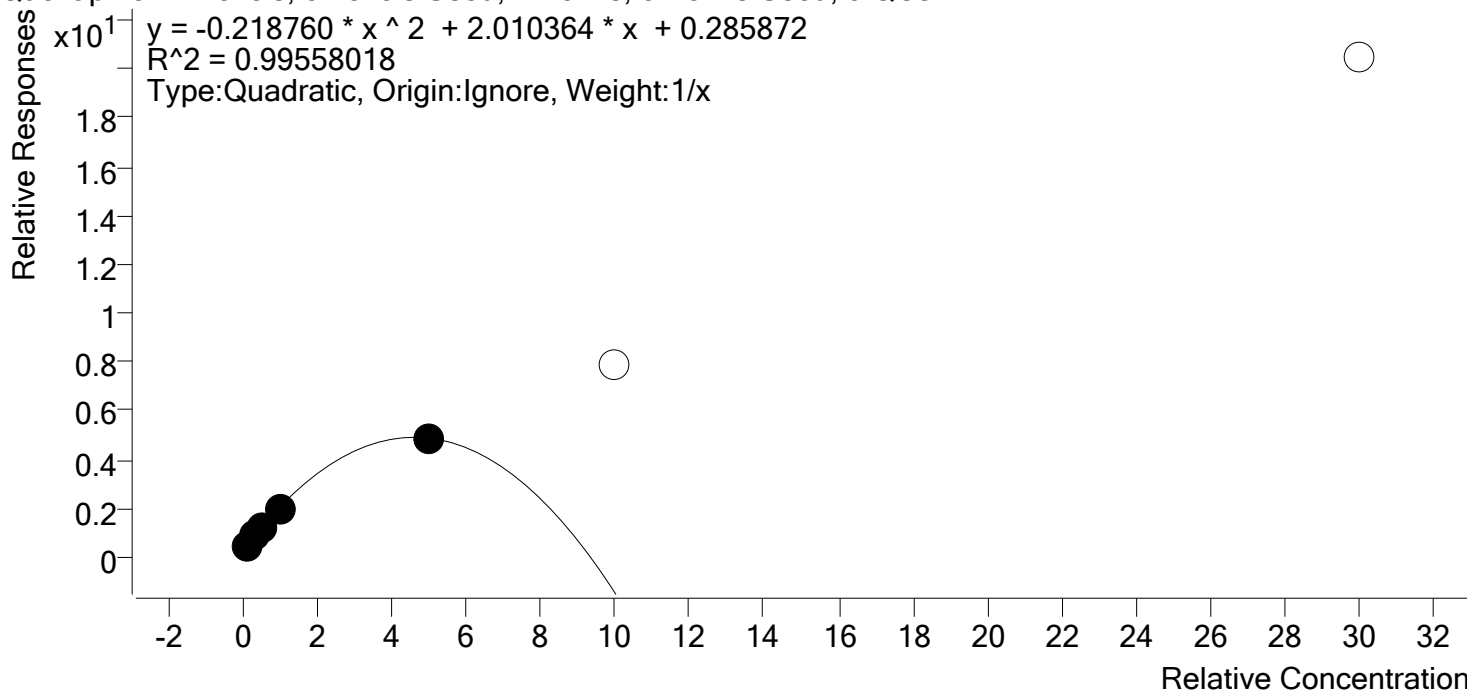
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	9.3	92.7
Cal 2- 25ng	2	✓	25.0	27.0	108.2
Cal 3 -50ng	3	✓	50.0	56.0	112.0
Cal 4-100ng	4	✓	100.0	119.1	119.1
Cal 5-500ng	5	✓	500.0	477.6	95.5
Cal 6-1000ng	6	✓	1000.0	905.8	90.6
Cal 7-3000ng	7	✓	3000.0	2458.4	81.9



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Quetiapine **Internal Standard** Temazepam-D5 ISTD

Quetiapine - 7 Levels, 5 Levels Used, 7 Points, 5 Points Used, 0 QCs



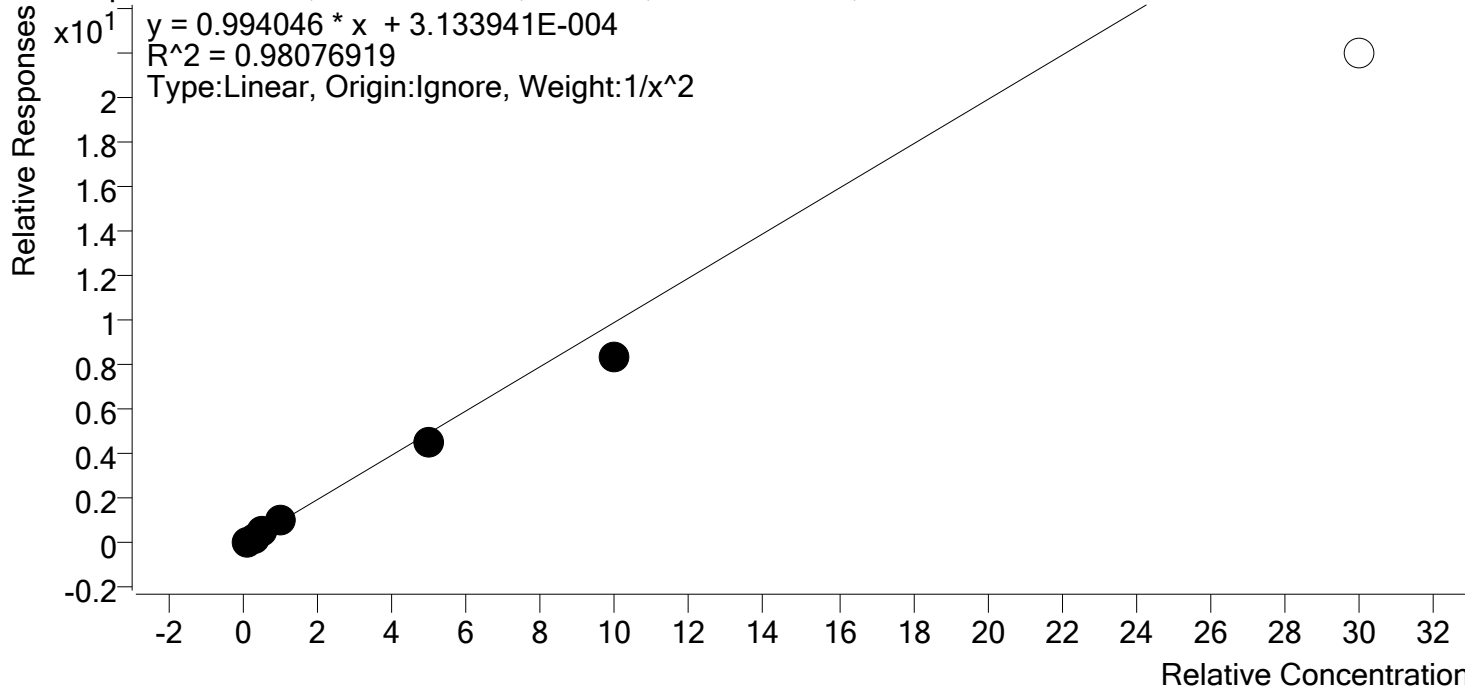
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	8.9	88.5
Cal 2- 25ng	2	✓	25.0	28.1	112.4
Cal 3 -50ng	3	✓	50.0	52.0	103.9
Cal 4-100ng	4	✓	100.0	94.8	94.8
Cal 5-500ng	5	✓	500.0	425.3	85.1
Cal 6-1000ng	6	✗	1000.0	ND	
Cal 7-3000ng	7	✗	3000.0	ND	



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Temazepam **Internal Standard** Temazepam-D5 ISTD

Temazepam - 7 Levels, 6 Levels Used, 7 Points, 6 Points Used, 0 QCs



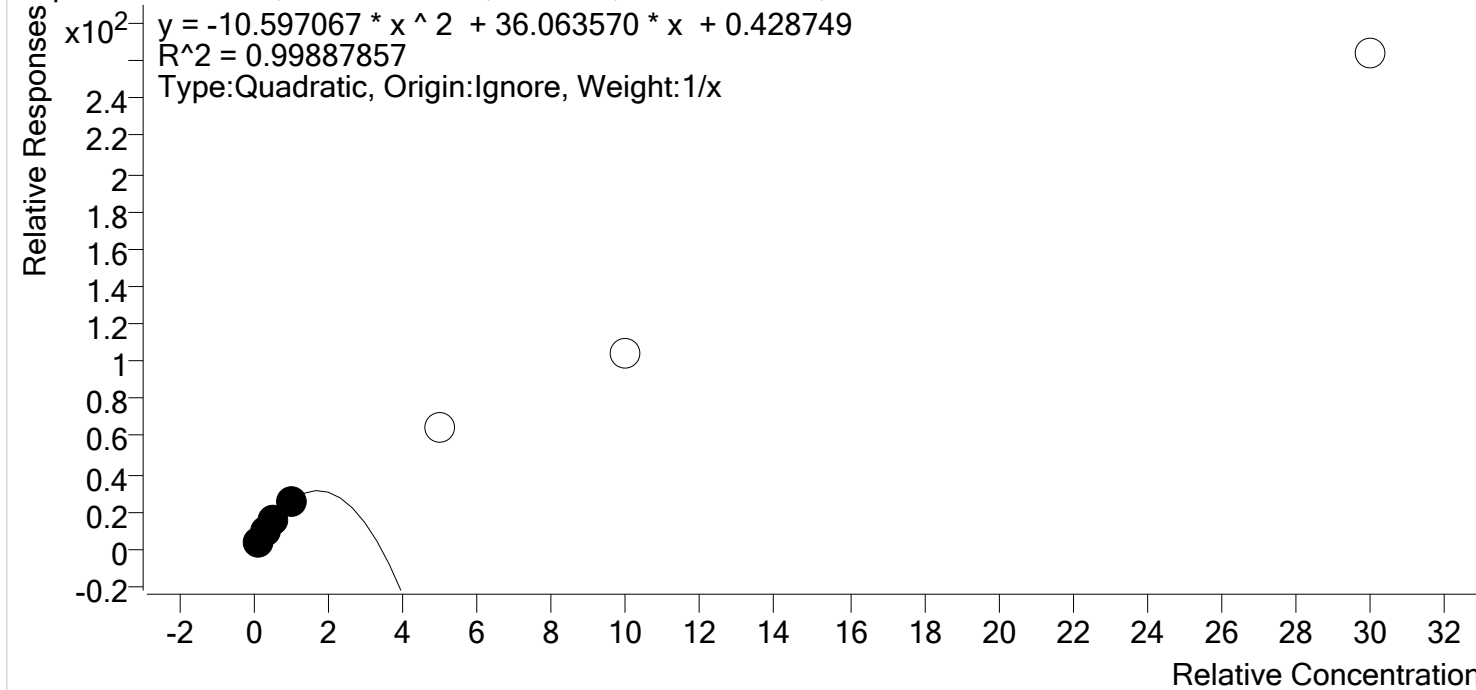
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	9.5	94.9
Cal 2- 25ng	2	✓	25.0	26.3	105.2
Cal 3 -50ng	3	✓	50.0	54.6	109.3
Cal 4-100ng	4	✓	100.0	114.9	114.9
Cal 5-500ng	5	✓	500.0	460.6	92.1
Cal 6-1000ng	6	✓	1000.0	836.2	83.6
Cal 7-3000ng	7	x	3000.0	2208.4	73.6



Compound Calibration Report

Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Zolpidem **Internal Standard** Nordiazepam-D5 ISTD

Zolpidem - 7 Levels, 4 Levels Used, 7 Points, 4 Points Used, 0 QCs



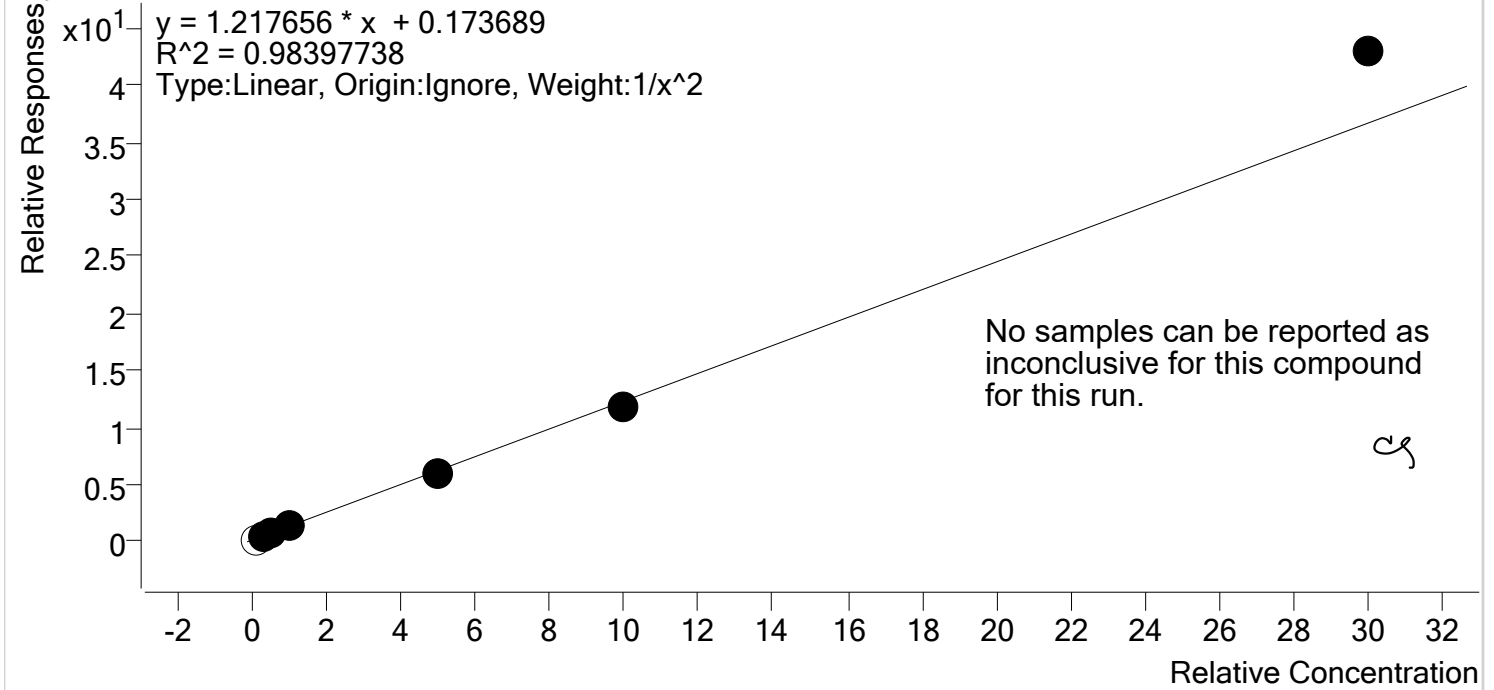
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	✓	10.0	9.8	98.1
Cal 2- 25ng	2	✓	25.0	26.0	104.1
Cal 3 -50ng	3	✓	50.0	48.6	97.3
Cal 4-100ng	4	✓	100.0	100.7	100.7
Cal 5-500ng	5	✗	500.0	ND	
Cal 6-1000ng	6	✗	1000.0	ND	
Cal 7-3000ng	7	✗	3000.0	ND	

Compound Calibration Report



Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Last Cal. Update 9/5/2019 12:47 PM
Analyst Name ISP\datastor
Analyte Zopiclone **Internal Standard** Nordiazepam-D5 ISTD

Zopiclone - 7 Levels, 6 Levels Used, 7 Points, 6 Points Used, 0 QCs



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1-10ng	1	x	10.0	1.5	14.6
Cal 2- 25ng	2	✓	25.0	26.7	106.9
Cal 3 -50ng	3	✓	50.0	43.6	87.2
Cal 4-100ng	4	✓	100.0	99.2	99.2
Cal 5-500ng	5	✓	500.0	471.4	94.3
Cal 6-1000ng	6	✓	1000.0	953.1	95.3
Cal 7-3000ng	7	✓	3000.0	3514.2	117.1

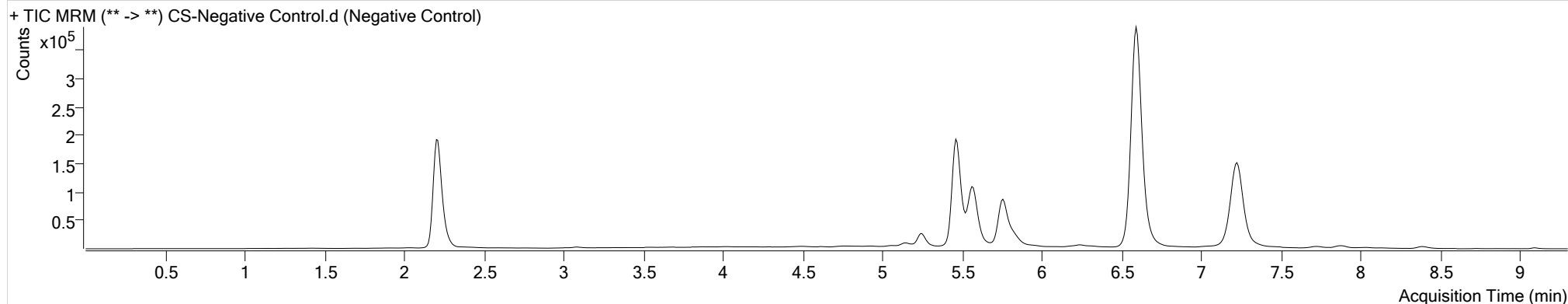
AM #13 Benzodiazepines and Z-Drugs



Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Calibration Last Update 9/5/2019 12:47:18 PM

Instrument	Falco	Data File	CS-Negative Control.d
Type	Sample	Sample	Negative Control
Acq. Method	Benzos_Z_Drugs 053019 FINAL-5ul.m	Comment	Worklist 3652
Sample Position	P5-B1		
Injection Volume	5		
Acq. Date-Time	9/4/2019 4:41:17 PM		
Sample Info.			

Sample Chromatogram



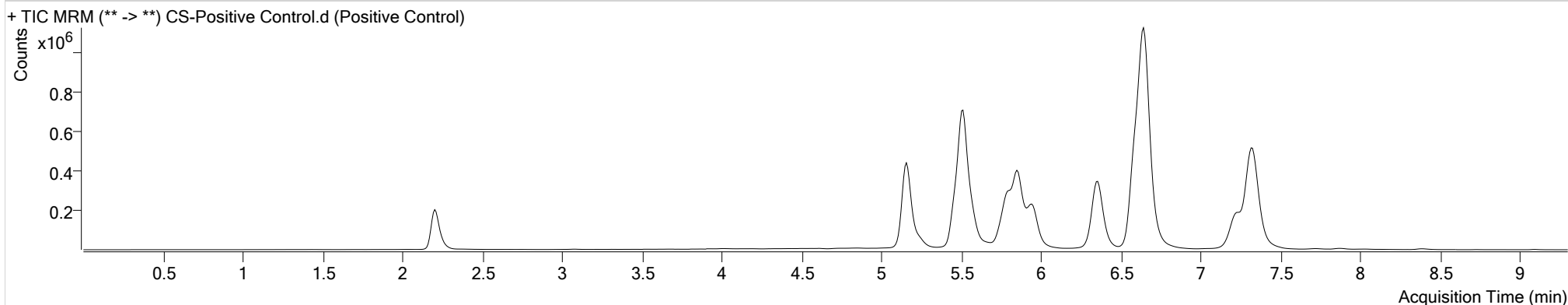
AM #13 Benzodiazepines and Z-Drugs



Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Calibration Last Update 9/5/2019 12:47:18 PM

Instrument Falco **Data File** CS-Positive Control.d
Type Sample **Sample** Positive Control
Acq. Method Benzos_Z_Drugs 053019 FINAL-5ul.m
Sample Position P5-B2 **Comment** Worklist 3652
Injection Volume 5
Acq. Date-Time 9/4/2019 4:53:47 PM
Sample Info.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Alprazolam	5.942	928589	1165.20	32.6	589.26	62729	341.4820 ng/ml
Clonazepam	5.789	666101	9168.59	42.6	10165.68	257725	266.4588 ng/ml
Diazepam	7.326	2158851	∞	39.9	4776.10	541966	296.7194 ng/ml
Flunitrazepam	6.354	1130672	17410.57	43.2	18041.00	257725	228.5817 ng/ml
Lorazepam	5.848	358195	5328.97	98.2	10002.35	260459	290.9012 ng/ml
Nitrazepam	5.160	1227588	21376.04	53.0	36684.61	257725	284.5793 ng/ml
Nordiazepam	5.515	5815	∞	317.0 High	599.40	260459	0.9499 ng/ml
Oxazepam	5.513	1963644	∞	42.3	5253.05	255065	331.3474 ng/ml
Temazepam	6.642	4033026	58523.63	33.9	∞	1501509	270.1755 ng/ml

AM #13 Benzodiazepines and Z-Drugs

**Batch results**

D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin

Calibration Last Update

9/5/2019 12:47:18 PM

Instrument

Falco

Data File

CS-Oxazepam Glucuronide NEG.d

Type

Sample

Sample

Oxazepam Glucuronide NEG

Acq. Method

Benzos_Z_Drugs 053019 FINAL-5ul.m

Comment

Worklist 3652

Sample Position

P5-A8

Injection Volume

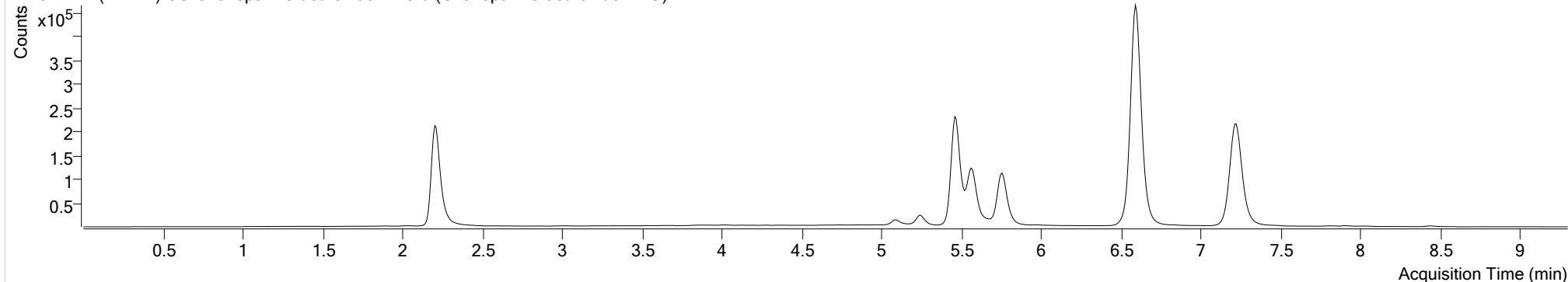
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Acq. Date-Time

9/4/2019 4:03:46 PM

Sample Info.**Sample Chromatogram**

+ TIC MRM (** -> **) CS-Oxazepam Glucuronide NEG.d (Oxazepam Glucuronide NEG)



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Oxazepam	5.505	15020	9.24	48.5	140.57	299098	1.5132 ng/ml

AM #13 Benzodiazepines and Z-Drugs

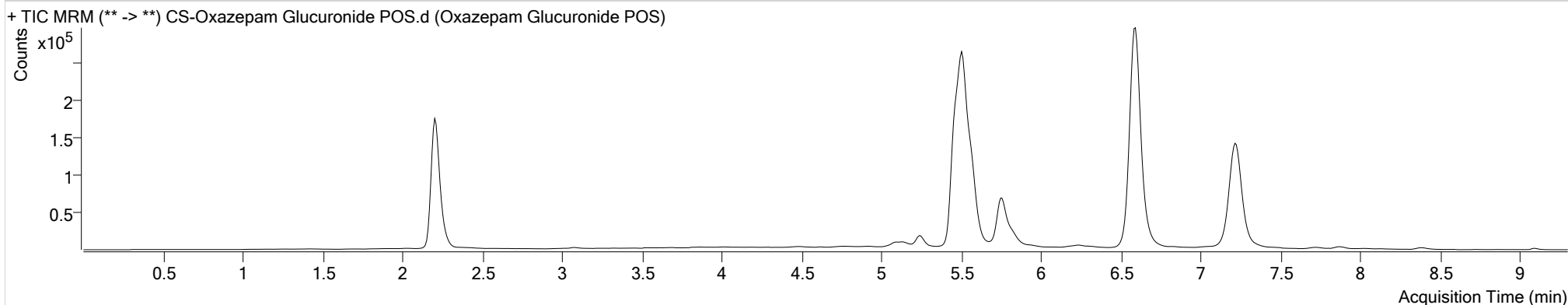


Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Calibration Last Update 9/5/2019 12:47:18 PM

Instrument Falco
Type Sample
Acq. Method Benzos_Z_Drugs 053019 FINAL-5ul.m
Sample Position P5-A9
Injection Volume 5
Acq. Date-Time 9/4/2019 4:16:17 PM
Sample Info.

Data File CS-Oxazepam Glucuronide POS.d
Sample Oxazepam Glucuronide POS
Comment Worklist 3652

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Oxazepam	5.513	606532	8617.56	43.7	2672.04	194919	133.5394 ng/ml

AM #13 Benzodiazepines and Z-Drugs



Batch results

D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin

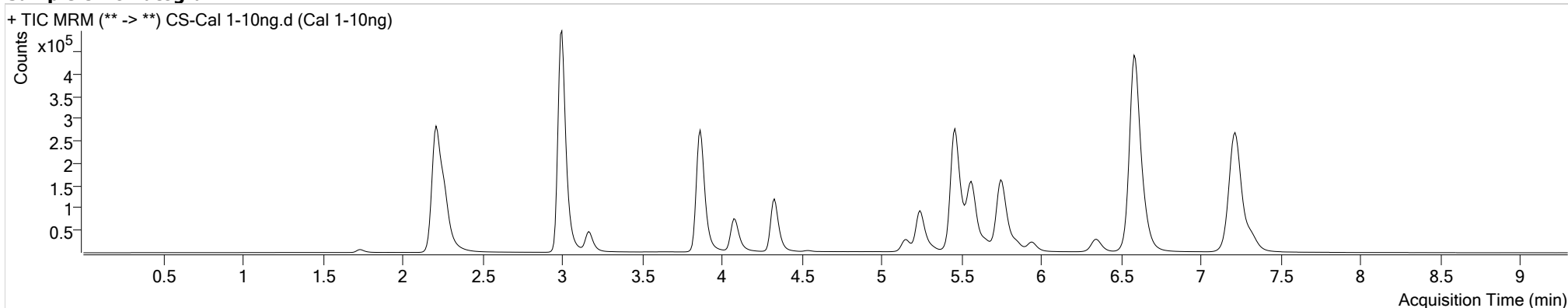
Calibration Last Update

9/5/2019 12:47:18 PM

Instrument Type Falco
Acq. Method Benzos_Z_Drugs 053019 FINAL-5ul.m
Sample Position P5-A1
Injection Volume 5
Acq. Date-Time 9/4/2019 2:23:45 PM
Sample Info.

Data File CS-Cal 1-10ng.d
Sample Cal 1-10ng
Comment Worklist 3652

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-Aminoclonazepam	1.737	18059	987.57	31.5	411.04	1024023	10.2637 ng/ml
7-Aminoflunitrazepam	2.274	168325	8323.03	30.3	2680.16	1024023	9.6295 ng/ml
Alpha-Hydroxyalprazolam	5.281	14445	648.01	88.2	484.22	229215	11.3706 ng/ml
Alpha-hydroxytriazolam	5.322	13570	953.02	46.1	383.64	338365	9.6583 ng/ml
Alprazolam	5.942	67437	2391.69	29.2	595.01	229215	10.1590 ng/ml
Chlordiazepoxide	3.167	117946	6012.01	27.8	2075.06	338365	9.5361 ng/ml
Clonazepam	5.789	41029	1835.04	41.3	1136.67	453769	9.5555 ng/ml
Diazepam	7.318	107615	3913.31	39.1	1352.17	826913	9.6674 ng/ml
Flunitrazepam	6.346	85838	3060.73	41.2	1780.33	453769	9.5172 ng/ml
Flurazepam	4.326	339262	8767.54	27.1	4584.24	826913	9.5206 ng/ml
Lorazepam	5.848	16822	405.47	90.5	660.75	338365	9.4972 ng/ml
Midazolam	4.075	228936	6207.19	23.2	2145.04	453769	9.8952 ng/ml
Nitrazepam	5.151	74774	2672.30	49.4	1704.26	453769	9.4444 ng/ml
Nordiazepam	5.658	49128	2614.63	55.8	1726.98	338365	9.3423 ng/ml
Oxazepam	5.505	80554	2379.57	43.7	938.77	350230	9.2664 ng/ml
Quetiapine	3.862	705885	16920.42	47.3	10707.96	1527363	8.8542 ng/ml
Temazepam	6.642	144556	5692.97	34.8	845.90	1527363	9.4896 ng/ml
Zolpidem	2.999	1307563	170651.10	36.6	43282.06	338365	9.8093 ng/ml

Cal 1-10ng

AM #13 Benzodiazepines and Z-Drugs



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Zopiclone	2.250	64792	3532.38	62.9	2850.56	338365	1.4615 ng/ml

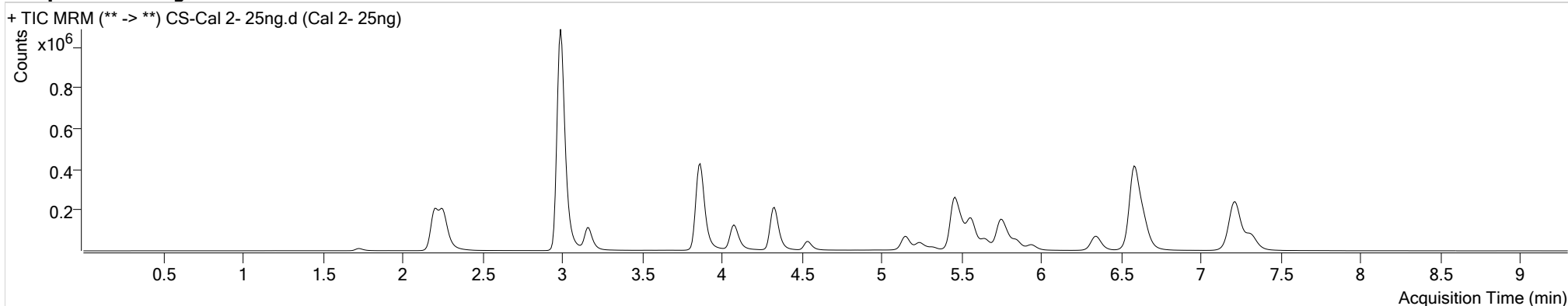
AM #13 Benzodiazepines and Z-Drugs



Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Calibration Last Update 9/5/2019 12:47:18 PM

Instrument Falco **Data File** CS-Cal 2- 25ng.d
Type Cal **Sample** Cal 2- 25ng
Acq. Method Benzos_Z_Drugs 053019 FINAL-5ul.m
Sample Position P5-A2 **Comment** Worklist 3652
Injection Volume 5
Acq. Date-Time 9/4/2019 2:36:15 PM
Sample Info.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-Aminoclonazepam	1.728	29608	1682.00	31.6	367.28	718641	22.5971 ng/ml
7-Aminoflunitrazepam	2.266	251117	9584.45	30.4	3298.64	718641	27.5660 ng/ml
Alpha-Hydroxyalprazolam	5.281	16253	921.17	88.9	140.78	94449	23.2408 ng/ml
Alpha-hydroxytriazolam	5.322	32764	1451.14	45.8	685.24	324964	25.9456 ng/ml
Alprazolam	5.942	87910	4468.13	30.2	525.23	94449	24.6951 ng/ml
Chlordiazepoxide	3.167	292077	8508.32	29.2	4126.07	324964	26.7400 ng/ml
Clonazepam	5.789	105122	2827.69	39.1	2029.71	408582	26.7433 ng/ml
Diazepam	7.318	254683	5979.87	39.7	2231.95	735019	25.7853 ng/ml
Flunitrazepam	6.346	214976	6279.40	41.4	2431.84	408582	27.1023 ng/ml
Flurazepam	4.326	654731	23017.41	27.1	4655.26	735019	27.6462 ng/ml
Lorazepam	5.848	41446	472.61	93.2	1421.09	324964	26.0190 ng/ml
Midazolam	4.075	406549	10135.59	23.1	3633.54	408582	26.4307 ng/ml
Nitrazepam	5.151	184980	5869.15	50.3	4024.24	408582	26.6734 ng/ml
Nordiazepam	5.650	131792	3584.51	56.4	3399.62	324964	27.1271 ng/ml
Oxazepam	5.505	207671	5320.96	43.4	2011.09	323412	27.0390 ng/ml
Quetiapine	3.862	1178819	124330.71	46.8	9347.16	1414255	28.1008 ng/ml
Temazepam	6.642	370190	∞	35.2	1869.16	1414255	26.3009 ng/ml
Zolpidem	2.990	2954987	24167.82	36.3	74501.13	324964	26.0143 ng/ml

Cal 2- 25ng

AM #13 Benzodiazepines and Z-Drugs



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Zopiclone	2.250	162163	7507.83	63.8	5000.21	324964	26.7177 ng/ml

AM #13 Benzodiazepines and Z-Drugs



Batch results

D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin

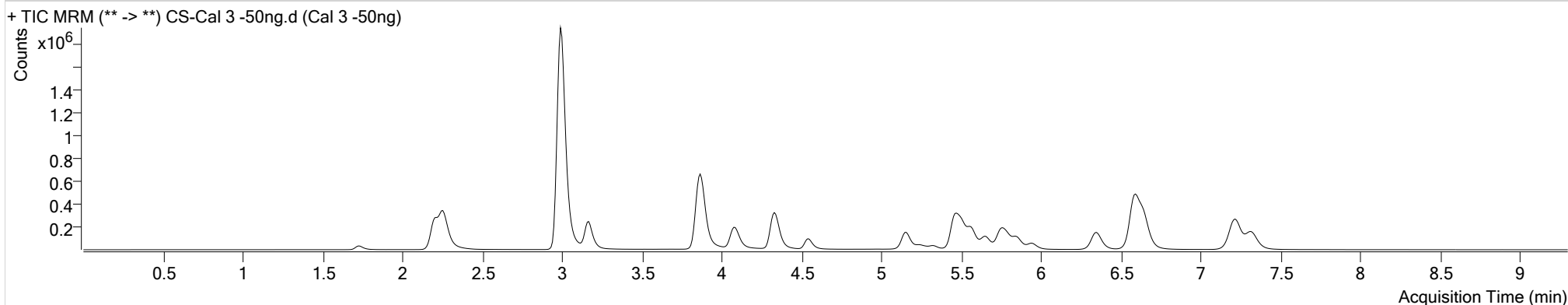
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Instrument Type Falco
Acq. Method Benzos_Z_Drugs 053019 FINAL-5ul.m
Sample Position P5-A3
Injection Volume 5
Acq. Date-Time 9/4/2019 2:48:45 PM
Sample Info.

Data File CS-Cal 3 -50ng.d
Sample Cal 3 -50ng
Comment Worklist 3652

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-Aminoclonazepam	1.728	91270	4812.55	31.9	1713.62	950256	52.1362 ng/ml
7-Aminoflunitrazepam	2.266	564495	11655.26	31.0	3885.44	950256	51.2749 ng/ml
Alpha-Hydroxyalprazolam	5.281	31234	142.47	83.5	92.96	88458	42.9423 ng/ml
Alpha-hydroxytriazolam	5.322	71708	3502.65	50.1	811.85	360156	52.3062 ng/ml
Alprazolam	5.942	159736	6286.87	34.9	2248.03	88458	44.6766 ng/ml
Chlordiazepoxide	3.167	633826	29565.12	29.8	7716.97	360156	53.6630 ng/ml
Clonazepam	5.789	232396	6135.96	39.5	3331.89	455441	52.8013 ng/ml
Diazepam	7.318	551517	9644.01	39.8	5986.16	810936	50.6374 ng/ml
Flunitrazepam	6.346	460795	10998.52	41.3	2109.58	455441	52.4428 ng/ml
Flurazepam	4.326	1060771	14924.50	26.9	∞	810936	46.2896 ng/ml
Lorazepam	5.848	95652	2505.57	94.0	2765.51	360156	55.3255 ng/ml
Midazolam	4.075	678583	∞	23.5	2161.88	455441	46.0049 ng/ml
Nitrazepam	5.151	410163	6367.18	51.0	6203.32	455441	53.4694 ng/ml
Nordiazepam	5.658	293883	2709.53	55.6	3551.31	360156	55.1622 ng/ml
Oxazepam	5.505	478842	10859.01	43.2	4003.11	364363	56.0217 ng/ml
Quetiapine	3.862	2004758	139674.23	46.7	23552.34	1576721	51.9643 ng/ml
Temazepam	6.642	856825	29546.03	34.3	2261.76	1576721	54.6362 ng/ml
Zolpidem	2.990	5568537	375859.73	36.0	162278.40	360156	48.6341 ng/ml

Cal 3 -50ng

AM #13 Benzodiazepines and Z-Drugs



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Zopiclone	2.241	253679	17111.15	64.0	4988.75	360156	43.5811 ng/ml

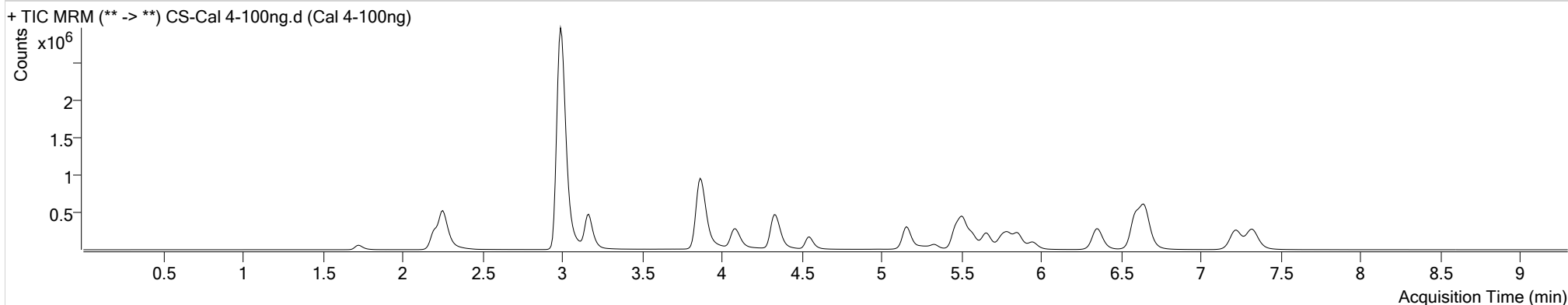
AM #13 Benzodiazepines and Z-Drugs



Batch results D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
Calibration Last Update 9/5/2019 12:47:18 PM

Instrument Falco **Data File** CS-Cal 4-100ng.d
Type Cal **Sample** Cal 4-100ng
Acq. Method Benzos_Z_Drugs 053019 FINAL-5ul.m
Sample Position P5-A4 **Comment** Worklist 3652
Injection Volume 5
Acq. Date-Time 9/4/2019 3:01:17 PM
Sample Info.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-Aminoclonazepam	1.728	168153	7287.66	32.7	2101.83	900354	103.9112 ng/ml
7-Aminoflunitrazepam	2.266	902853	3380.18	31.3	4812.57	900354	90.8908 ng/ml
Alpha-Hydroxyalprazolam	5.290	60878	2005.41	83.7	3398.02	64371	107.4463 ng/ml
Alpha-hydroxytriazolam	5.331	149265	4610.05	51.0	1374.01	354163	111.9484 ng/ml
Alprazolam	5.950	301161	4933.77	30.0	304.74	64371	110.2769 ng/ml
Chlordiazepoxide	3.167	1230628	19745.85	30.6	12324.98	354163	107.2825 ng/ml
Clonazepam	5.798	446873	8481.51	40.0	8917.08	424320	108.7202 ng/ml
Diazepam	7.326	1041980	19066.79	39.4	8002.42	784576	98.9099 ng/ml
Flunitrazepam	6.354	882751	8509.63	41.2	1812.06	424320	108.2080 ng/ml
Flurazepam	4.326	1644619	28274.71	28.2	8823.43	784576	102.7549 ng/ml
Lorazepam	5.856	195436	5978.79	95.3	5984.04	354163	116.0928 ng/ml
Midazolam	4.083	1029625	∞	24.3	4119.05	424320	105.8297 ng/ml
Nitrazepam	5.160	831604	23993.61	51.0	27581.90	424320	116.8485 ng/ml
Nordiazepam	5.658	597206	52343.48	55.7	∞	354163	114.6065 ng/ml
Oxazepam	5.513	981798	24511.74	42.5	14520.57	353587	119.0910 ng/ml
Quetiapine	3.862	3078873	113528.20	46.3	10708.78	1542624	94.8484 ng/ml
Temazepam	6.651	1762372	37227.05	34.4	14668.49	1542624	114.8979 ng/ml
Zolpidem	2.990	9207853	371843.45	35.7	171967.40	354163	100.7006 ng/ml

Cal 4-100ng

AM #13 Benzodiazepines and Z-Drugs



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Zopiclone	2.241	489453	6494.74	63.8	39038.37	354163	99.2325 ng/ml

AM #13 Benzodiazepines and Z-Drugs



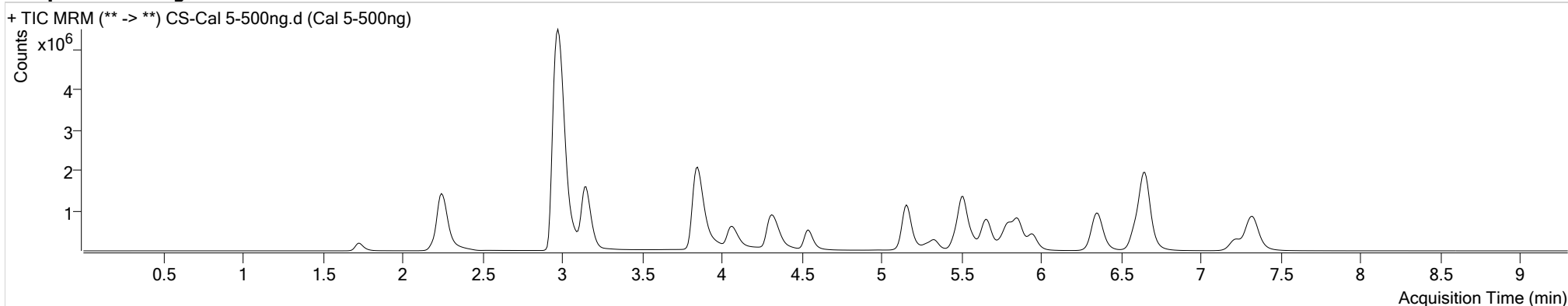
Batch results
Calibration Last Update

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Instrument Falco
Type Cal
Acq. Method Benzos_Z_Drugs 053019 FINAL-5ul.m
Sample Position P5-A5
Injection Volume 5
Acq. Date-Time 9/4/2019 3:13:46 PM
Sample Info.

Data File CS-Cal 5-500ng.d
Sample Cal 5-500ng
Comment Worklist 3652

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-Aminoclonazepam	1.728	550623	7027.29	33.6	5025.96	852415	490.4649 ng/ml
7-Aminoflunitrazepam	2.266	2420325	13040.89	32.6	∞	852415	268.9016 ng/ml
Alpha-Hydroxyalprazolam	5.281	312849	9495.81	76.6	7802.10	90308	381.5674 ng/ml
Alpha-hydroxytriazolam	5.331	624727	7975.05	54.5	6767.71	349605	478.2136 ng/ml
Alprazolam	5.942	1171992	∞	32.7	∞	90308	299.7954 ng/ml
Chlordiazepoxide	3.151	4659390	126287.15	31.2	145773.76	349605	415.3525 ng/ml
Clonazepam	5.789	1610724	13479.79	42.2	8352.08	399300	415.7444 ng/ml
Diazepam	7.326	3694696	∞	39.9	∞	791470	347.7331 ng/ml
Flunitrazepam	6.346	3190675	∞	42.4	∞	399300	416.6269 ng/ml
Lorazepam	5.848	755703	50756.00	98.9	35329.23	349605	457.8387 ng/ml
Nitrazepam	5.160	3224725	99387.45	51.4	48952.72	399300	482.7916 ng/ml
Nordiazepam	5.658	2348963	15639.08	54.7	∞	349605	458.3710 ng/ml
Oxazepam	5.513	3892921	129733.74	42.9	61269.00	351021	477.6130 ng/ml
Quetiapine	3.845	7727161	303390.99	46.7	125535.58	1583756	425.2987 ng/ml
Temazepam	6.651	7251435	152425.37	34.0	55339.83	1583756	460.5741 ng/ml
Zopiclone	2.233	2067526	211057.57	63.4	237443.46	349605	471.4148 ng/ml

AM #13 Benzodiazepines and Z-Drugs



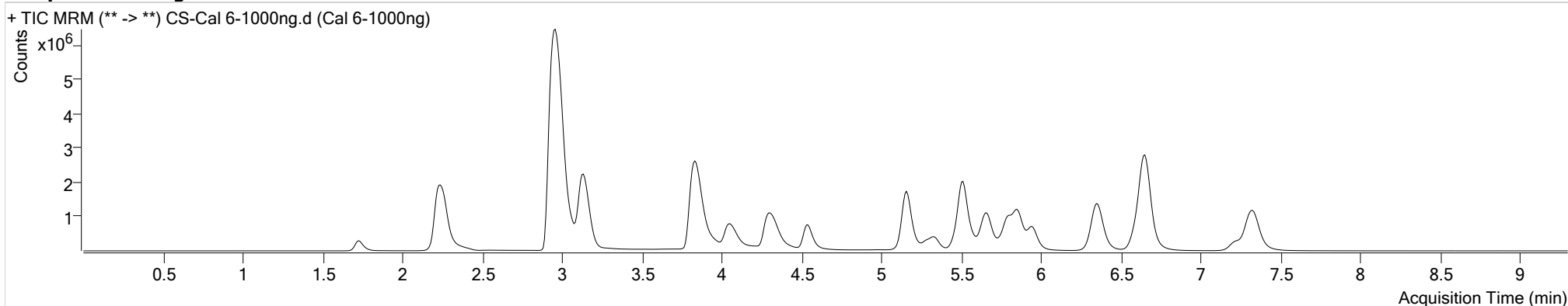
Batch results
Calibration Last Update

D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
9/5/2019 12:47:18 PM

Instrument Falco
Type Cal
Acq. Method Benzos_Z_Drugs 053019 FINAL-5ul.m
Sample Position P5-A6
Injection Volume 5
Acq. Date-Time 9/4/2019 3:26:16 PM
Sample Info.

Data File CS-Cal 6-1000ng.d
Sample Cal 6-1000ng
Comment Worklist 3652

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-Aminoflunitrazepam	2.266	3472538	∞	32.9	4216.84	720788	460.6494 ng/ml
Alpha-Hydroxyalprazolam	5.281	416661	10706.26	87.5	6413.00	83072	550.4253 ng/ml
Alpha-hydroxytriazolam	5.331	960487	∞	54.0	8396.86	294295	874.3153 ng/ml
Alprazolam	5.942	1952684	∞	33.0	9660.98	83072	540.2118 ng/ml
Chlordiazepoxide	3.134	7191834	12883.00	31.2	25422.17	294295	762.7256 ng/ml
Clonazepam	5.789	2439280	14580.49	43.0	14008.28	325106	773.0794 ng/ml
Diazepam	7.326	5436382	∞	40.0	∞	702744	576.2734 ng/ml
Flunitrazepam	6.346	4864539	44659.91	42.8	∞	325106	780.4635 ng/ml
Lorazepam	5.848	1147070	18181.23	100.6	111178.97	294295	826.4022 ng/ml
Nitrazepam	5.160	4999737	174868.77	52.4	6325.52	325106	919.7411 ng/ml
Nordiazepam	5.658	3512299	7079.98	55.2	∞	294295	814.6370 ng/ml
Oxazepam	5.513	6213884	56694.13	42.1	15777.53	295639	905.7630 ng/ml
Temazepam	6.651	11264349	395351.61	33.7	76273.06	1355178	836.1555 ng/ml
Zopiclone	2.225	3466626	144051.64	64.7	177437.74	294295	953.1197 ng/ml

AM #13 Benzodiazepines and Z-Drugs



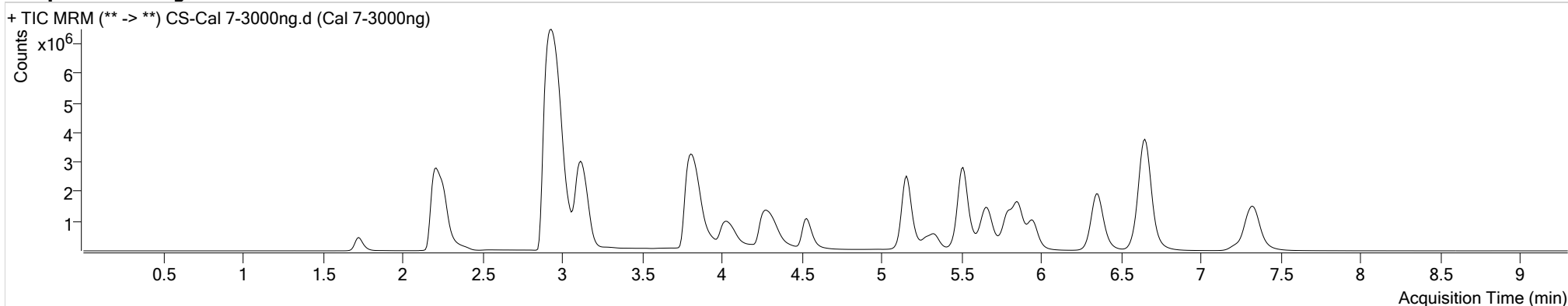
Batch results
Calibration Last Update

D:\MassHunter\Data\2019\AM 13\AM 13 worklist 3652\QuantResults\am 13 worklist 3652.batch.bin
9/5/2019 12:47:18 PM

Instrument Type Falco
Acq. Method Benzos_Z_Drugs 053019 FINAL-5ul.m
Sample Position P5-A7
Injection Volume 5
Acq. Date-Time 9/4/2019 3:38:46 PM
Sample Info.

Data File CS-Cal 7-3000ng.d
Sample Cal 7-3000ng
Comment Worklist 3652

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
7-Aminoflunitrazepam	2.266	4903130	∞	33.3	∞	343259	1378.1693 ng/ml
Alpha-Hydroxyalprazolam	5.281	919920	10353.12	75.9	19599.97	48926	2050.9961 ng/ml
Alpha-hydroxytriazolam	5.331	1404845	∞	54.2	6415.21	167382	2250.1643 ng/ml
Alprazolam	5.942	2908666	∞	32.8	4989.74	48926	1361.0314 ng/ml
Chlordiazepoxide	3.117	10723467	294784.17	31.2	39864.50	167382	2001.7943 ng/ml
Clonazepam	5.789	3319306	16961.61	43.4	13227.43	170840	2001.5305 ng/ml
Diazepam	7.326	7519183	∞	40.1	15036.42	413377	1355.0375 ng/ml
Flunitrazepam	6.346	6959226	∞	42.7	25847.21	170840	2125.3599 ng/ml
Lorazepam	5.856	1629980	16669.07	99.7	69840.38	167382	2066.2960 ng/ml
Nitrazepam	5.160	7414307	192886.62	52.3	72271.70	170840	2596.2803 ng/ml
Nordiazepam	5.658	4983920	∞	54.6	27098.35	167382	2033.3082 ng/ml
Oxazepam	5.513	9193613	307634.65	42.5	50624.16	161229	2458.4052 ng/ml
Temazepam	6.651	16332567	137149.73	33.7	98248.40	743982	2208.4077 ng/ml
Zopiclone	2.200	7191437	317855.18	63.1	102963.17	167382	3514.1812 ng/ml