

















cg

Worklist: 3734

<u>LAB_CASE</u>	<u>ITEM</u>	<u>TASK_ID</u>	<u>DESCRIPTION</u>	
C2019-1667	2	165821	AM 25 Blood Multi-Drug Screen by LC-QQQ	
C2019-1739	2	165822	AM 25 Blood Multi-Drug Screen by LC-QQQ	
C2019-1770	2	165823	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-3991	3	165824	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-3991	4	165825	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-4014	4	165826	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2658	1	165827	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2659	3	165828	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2734	1	165829	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2772	1	165830	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2796	1	165831	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2797	1	165832	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2885	1	165833	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2893	1	165834	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2915	1	165835	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2934	1	165836	AM 25 Blood Multi-Drug Screen by LC-QQQ	

This batch of samples was extracted on 09/26/19 but the data was not evaluated or used due to possible methamphetamine contamination. The samples were re-extracted on 10/01/19 with no issues.

cg

cg

Worklist: 3802

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>
M2019-3828	3	UCK	AM 25 Blood Multi-Drug Screen by LC-QQQ
M2019-4283	3	UCK	AM 25 Blood Multi-Drug Screen by LC-QQQ



These samples were included in this batch but I was unable to add them to the worklist.

cg

AM# 25: Multi-Drug Screen in Blood by LC-MS/MS

Extraction Date: 10/01/2019
 Plate lot#: 0543908

Analyst: Celena Shrum
 Plate Expiration: 11/28/2019

Mobile phase A: 10mM Amm Form
 0.5M Ammonium Hydroxide

Blank Blood Lot: 445283-3
LCMS-QQQ ID: 069901

Mobile phase B: 0.1% Formic Acid in MeOH
 Ethyl Acetate LC Methanol

Column: Phenomenex Phenyl Hexyl (4.6x50mm, 2.6um)

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. Urine Hydrolysis: In blank well, add 250µL urine, 40µL BG Turbo, and 100µL 500mM sodium phosphate buffer. Place on plate shaker for 5 minutes.
- 3. Using a calibrated pipette, pipette **250µL blood and urine** (if applicable) into wells of analytical (standards) plate. **Pipette ID: #3**
- 4. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. *Shaker ID: 067105*
- 5. Pipette **250µL 0.5M ammonium hydroxide** in wells of analytical plate.
- 6. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 7. Transfer **300µL of blood+base** mixture to corresponding wells of SLE+ plate.
- 8. 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*
- 9. Wait 5 minutes.
- 10. Add **900uL ethyl acetate.**
- 11. Wait 5 minutes.
- 12. Apply positive pressure for approx. 15 seconds. **(10-15 PSI- Selector to the left).**
- 13. Add **900uL ethyl acetate.**
- 14. Wait 5 minutes.
- 15. Apply positive pressure for approx. 15 seconds. **(10-15 PSI- Selector to the left).**
- 16. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C. If run contains urine, add 50µL 1% HCl in MeOH to wells and place plate cover on plate before drying. *SPE Dry ID: 067103*
- 17. Reconstitute in **100µL 100% LC MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

Post-Analytic

- 1. Open quantitation software and create a new quantitation batch.
- 2. Make necessary changes to integration limits
- 3. Evaluate samples, S/N of primary transition >5 and S/N of secondary transition >3 or evaluation of peak symmetry and resolution. Within +/- 2% or 0.1 min RT of administrative control. Calculated concentration of 5 or greater or 2-5 for discretionary range.
- 4. Did all QCs pass for each analyte? If no, describe issue in comments (below).
- 5. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: Zopiclone not evaluated due to poor ISTD response.



Idaho State Police Forensic Services

AM #25 Blood Multi-Drug Screen by LCMS-QQQ

Methanol External Control Solution (Lot: 042719)

100 ul of 1mg/mL stock was added to each drug to 9600 ul of LC MeOH.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	184782	
Morphine	Cerilliant	FE08141515	November 2020
Metoprolol	Cerilliant	FN06091510	July 2020
Flunitrazepam	Cerilliant	FE08051602	August 2021
Trazodone	Cerilliant	FN12151403	January 2020
Prepared:	04/27/19		
Prepared By:	Tamara Salazar		
Expires:	01/31/2020		

Blood External Control Solution (Lot: WS042719)

100 ul of methanol external control solution was added to 9900 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		042719
Prepared:	04/27/19	
Prepared by:	Tamara Salazar	
Expires:	01/31/2020	



Idaho State Police Forensic Services

AM #25 Blood and Urine Multi-Drug Screen by LCMS-QQQ

Methanol External Control Solution (Lot: 042719)

100 ul of 1mg/mL stock was added to each drug to 9600 ul of LC MeOH.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	184782	
Morphine	Cerilliant	FE08141515	November 2020
Metoprolol	Cerilliant	FN06091510	July 2020
Flunitrazepam	Cerilliant	FE08051602	August 2021
Trazodone	Cerilliant	FN12151403	January 2020
Prepared:	04/27/19		
Prepared By:	Tamara Salazar		
Expires:	01/31/2020		

Urine External Control Solution (Lot: WS092519)

200 ul of methanol external control solution was added to 9800 ul of urine.

Approximately 100ng/mL of each compound.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Urine	Pocatello Lab	POC031319
Methanol External Control Solution		042719
Prepared:	09/25/19	
Prepared by:	Celena Shrum	
Expires:	01/31/2020	

AM #25 Multi-Drug Screen Results



Batch results

D:\MassHunter\Data\2019\AM 25\100119 MDS CS THCQ SP\QuantResults\AM 25 urines 100119 CS.batch.bin

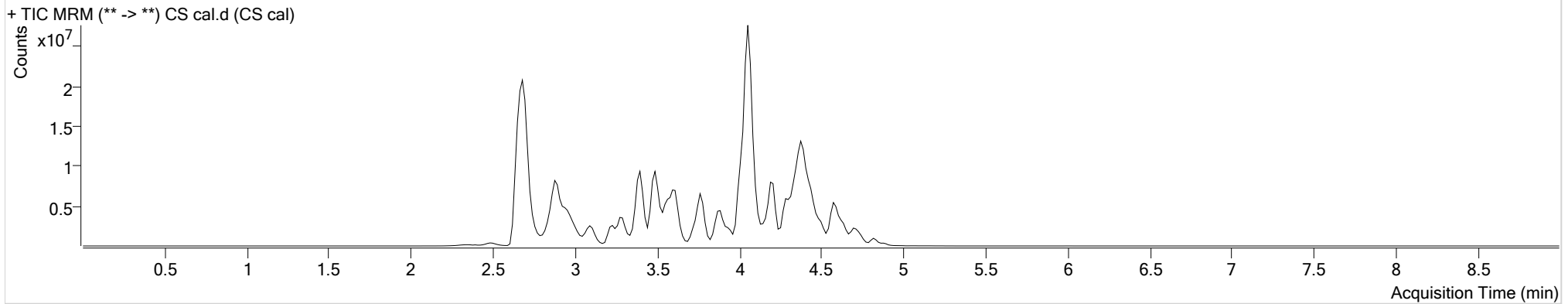
Calibration Last Update

10/31/2019 9:30:08 AM

Instrument Falco
Type Cal
Acq. Method am 25 all.m
Sample Position P2-G9
Injection Volume 5
Acq. Date-Time 10/1/2019 3:11:02 PM
Sample Info.

Data File CS cal.d
Sample CS cal
Operator
Comment

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	2.936	10310	∞	∞	257567	10.0000
7-aminoclonazepam	3.551	99210	67.94	73230.49	445526	10.0000
7-aminoflunitrazepam	3.765	458665	43004.95	142.19	2704621	10.0000
Acetyl Fentanyl	3.869	95996	75.89	53556.65	8647322	10.0000
Acetyl Norfentanyl	2.869	104320	135340.60	44.71	4448920	10.0000
a-hydroxyalprazolam	4.483	22300	17.58	11832.03	124145	10.0000
alpha-hydroxymidazolam	4.574	425017	284.65	136242.98	2624375	10.0000
alpha-PVP	3.527	1915997	569.81	720.08	7379469	10.0000
Alprazolam	4.593	516512	46.01	266.02	1316049	10.0000
Amitriptyline	4.445	1610138	∞	478.36	3118437	10.0000
Amphetamine	2.873	1091807	513.45	525.58	2270152	10.0000
Benzoyllecgonine	3.351	279726	351.02	55.85	1329738	10.0000
Buprenorphine	4.586	226262	113579.37	2319.21	1060885	10.0000
Bupropion	3.741	1558122	165867.27	471.49	4617588	10.0000
Carbamazepine	4.218	2577914	∞	∞	16214581	10.0000
Carisoprodol	4.201	174297	264.17	38.71	1190924	10.0000
Chlordiazepoxide	4.717	168002	∞	127.65	4030154	10.0000
Chlorpheniramine	3.936	5331	28.96	∞	23620616	10.0000

AM #25 Multi-Drug Screen Results



CS

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Citalopram	4.069	1109074	744.26	972.03	4627699	10.0000
Clonazepam	4.439	46277	63.64	2417.23	104823	10.0000
Cocaine	3.565	1559363	2232251.06	4018.08	6872900	10.0000
Codeine	2.819	116145	971.16	10029.36	524756	10.0000
Cyclobenzaprine	4.368	1031424	∞	∞	2629841	10.0000
Desipramine	4.400	1814461	267.41	3490.70	11627179	10.0000
Dextromethorphan	4.076	756160	273.38	152.09	3521154	10.0000
Dextrorphan	3.370	899808	206.81	556.46	5954095	10.0000
Diazepam	4.841	359936	217.04	347.22	1737481	10.0000
Dihydrocodeine	2.741	421529	1600.56	1125.70	1996868	10.0000
Diphenhydramine	4.015	3316115	307.55	7295.78	23620616	10.0000
Doxepin	4.167	914947	235.76	612.76	6069470	10.0000
Doxylamine	3.614	3506398	1065.50	6698.48	12712988	10.0000
EDDP	4.058	2120376	447.43	106802.69	13309274	10.0000
Estazolam	4.503	1019610	725.17	125.30	3026417	10.0000
Etizolam	4.619	83241	45954.44	852.09	3026417	10.0000
Fentanyl	4.098	88468	62.27	250.76	5580476	10.0000
Flunitrazepam	4.546	285928	262.14	314.31	64250	10.0000
Fluoxetine	4.333	1359346	∞	153.72	5096811	10.0000
Flurazepam	4.174	800105	1262100.87	447.47	64250	10.0000
Hydrocodone	3.031	378956	495.19	27.82	2239647	10.0000
Hydromorphone	2.502	291196	33.23	14.53	1079607	10.0000
Imipramine	4.398	2280967	68424.94	∞	8960804	10.0000
Ketamine	3.496	1345437	159.61	287.56	5760057	10.0000
Lamotrigine	3.585	74368	207.84	174.91	4513156	10.0000
Levamisole	2.976	1447094	31468.06	∞	6872900	10.0000
Lorazepam	4.423	6933	11.29	∞	104823	10.0000
Maprotiline	4.445	1610138	∞	∞	3118437	10.0000
MDA	3.008	353961	128.53	1077.87	1624947	10.0000
MDEA	3.237	1454995	429.23	324.76	6232238	10.0000
MDMA	3.084	1731228	1585541.93	630.42	1048893	10.0000
Meperidine	3.586	866397	5281.77	182.01	4513156	10.0000
Meprobamate	3.636	23425	616.21	22.41	120968	10.0000
Methadone	4.379	1991797	538.43	721.74	7325186	10.0000
Methamphetamine	2.979	1996709	∞	2014.48	8578978	10.0000
Methocarbamol	3.541	82269	45.53	213.10	4513156	10.0000
Methylphenidate	3.496	2647375	∞	62.64	13370385	10.0000
Metoprolol	3.416	278002	477.66	279604.50	4513156	10.0000
Midazolam	4.742	206977	610.61	∞	2319888	10.0000
Mirtazapine	3.952	1277985	284.13	2340.65	4513156	10.0000
Mitragynine	4.204	113490	85687.99	433652.81	6069470	10.0000
Morphine	2.338	80297	199.29	∞	53353	10.0000
Norbuprenorphine	3.851	6139	3487.62	5236.25	47742	10.0000
Nordiazepam	4.676	69113	183.99	7.94	243628	10.0000

AM #25 Multi-Drug Screen Results



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Norfentanyl	3.296	2061050	827946.57	998.54	7929878	10.0000
Norhydrocodone	2.942	23643	27102.61	11.00	442860	10.0000
Normeperidine	3.589	650038	371.31	132.82	1982697	10.0000
Noroxycodone	2.894	225183	∞	4.06 Low	664690	10.0000
Nortriptyline	4.432	817035	483.86	1598.95	1806583	10.0000
O-desmethyl-tramadol	2.898	3369294	∞	318.16	15360058	10.0000
Olanzapine	3.962	727268	3790.95	∞	36033	10.0000
Oxazepam	4.489	36320	16.02	16.19	195166	10.0000
Oxycodone	2.922	751551	106.61	158.05	2917391	10.0000
Oxymorphone	2.393	164558	40.86	35.24	435259	10.0000
Paroxetine	4.390	161496	∞	∞	4132177	10.0000
Phenazepam	4.619	90836	318.57	48222.69	523455	10.0000
Phencyclidine	3.909	1400592	485.34	464.54	5963516	10.0000
Phentermine	3.131	286294	99.40	27.03	4568668	10.0000
Phenytoin	4.109	4130	15.87	35.24	36033	10.0000
Promethazine	4.351	3115225	3213.63	6956.94	13542402	10.0000
Pseudoephedrine	2.688	21060648	∞	∞	76577865	10.0000
Quetiapine	4.465	2222613	1153.45	72060.82	2440024	10.0000
Sertraline	4.579	857721	2035.02	∞	4132177	10.0000
Sufentanil	4.450	89523	190.05	106.64	6383826	10.0000
Tapentadol	3.421	1456844	793.49	650.30	7425186	10.0000
Temazepam	4.641	308615	∞	39.88	1707459	10.0000
Tramadol	3.401	3036332	732.34	37.82	13988775	10.0000
Trazodone	4.634	1959347	139636.11	150997.75	8415545	10.0000
Venlafaxine	3.781	2211989	416.13	98.15	11883962	10.0000
Zaleplon	4.334	397550	180454.48	163611.31	822127	10.0000
Zolpidem	4.302	2566168	∞	242.87	14057131	10.0000
Zopiclone	4.189	3174	51.80	882.99	13098	10.0000

AM #25 Multi-Drug Screen Results

**Batch results**

D:\MassHunter\Data\2019\AM 25\100119 MDS CS THCQ SP\QuantResults\AM 25 urines 100119 CS.batch.bin

Calibration Last Update

10/29/2019 1:23:05 PM

Instrument

Falco

Type

Sample

Acq. Method

am 25 all.m

Sample Position

P2-A7

Injection Volume

5

Acq. Date-Time

10/1/2019 3:20:42 PM

Sample Info.**Data File**

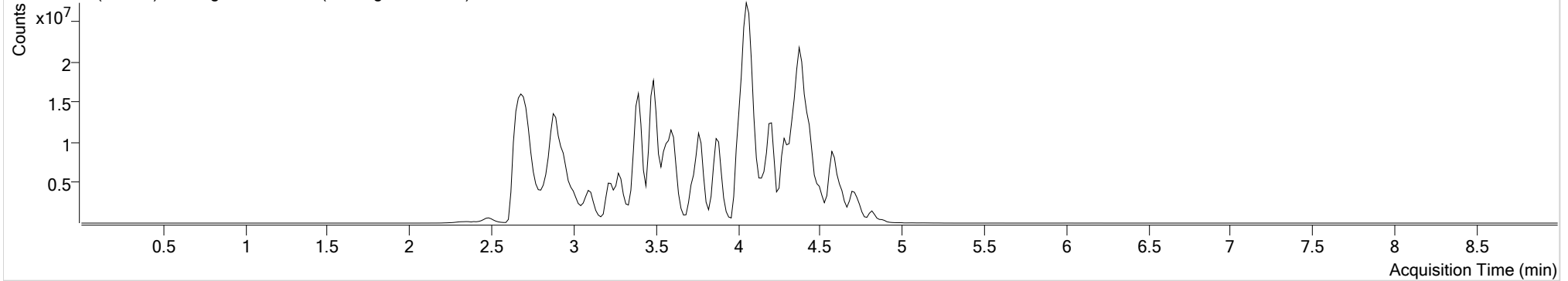
CS negative blood.d

Sample

CS negative blood

Operator**Comment****Sample Chromatogram**

+ TIC MRM (** -> **) CS negative blood.d (CS negative blood)



AM #25 Multi-Drug Screen Results

**Batch results**

D:\MassHunter\Data\2019\AM 25\100119 MDS CS THCQ SP\QuantResults\AM 25 urines 100119 CS.batch.bin

Calibration Last Update

10/29/2019 1:23:05 PM

Instrument

Falco

Data File

CS negative urine.d

Type

Sample

Sample

CS negative urine

Acq. Method

am 25 all.m

Operator**Sample Position**

P2-C7

Comment**Injection Volume**

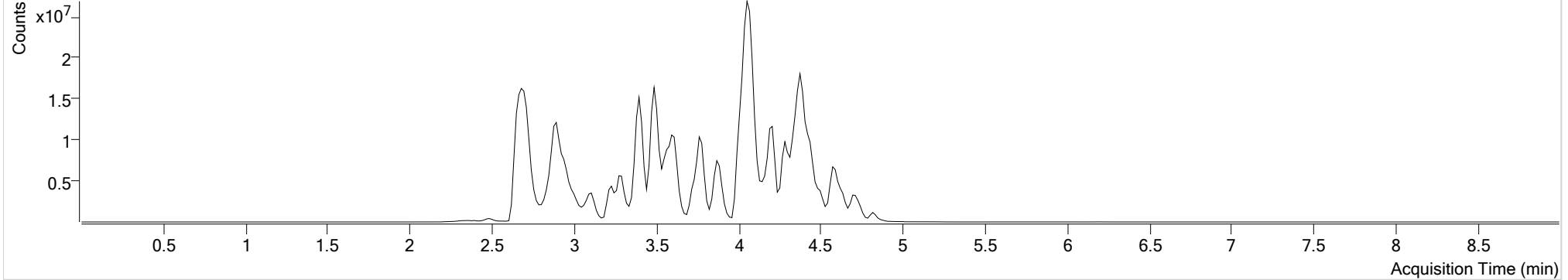
5

Acq. Date-Time

10/1/2019 3:39:44 PM

Sample Info.**Sample Chromatogram**

+ TIC MRM (** -> **) CS negative urine.d (CS negative urine)



AM #25 Multi-Drug Screen Results



Batch results

D:\MassHunter\Data\2019\AM 25\100119 MDS CS THCQ SP\QuantResults\AM 25 urines 100119 CS.batch.bin

Calibration Last Update

10/29/2019 1:23:05 PM

Instrument

Falco

Data File

CS ext ctrl blood.d

Type

Sample

Sample

CS ext ctrl blood

Acq. Method

am 25 all.m

Operator

Sample Position

P2-B7

Comment

Injection Volume

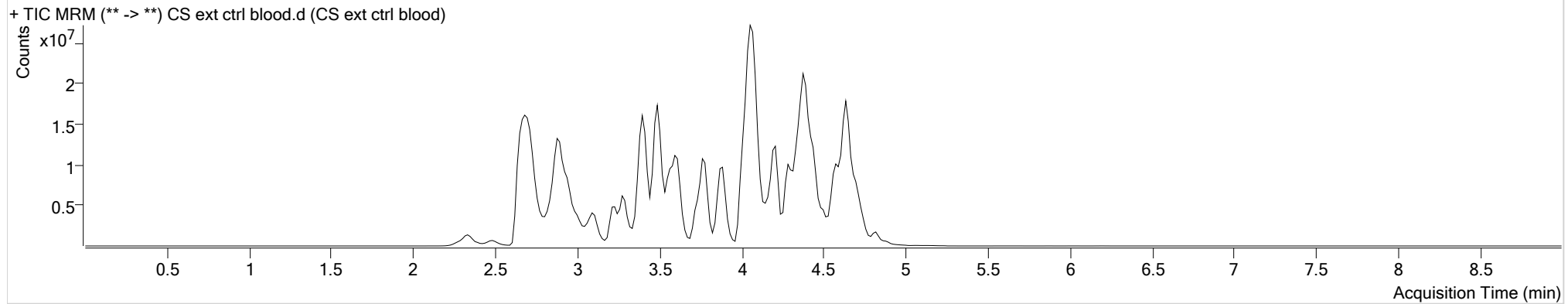
5

Acq. Date-Time

10/1/2019 3:30:13 PM

Sample Info.

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Flunitrazepam	4.546	5754875	7802.48	127729.99	129372	99.9566
Metoprolol	3.431	4686398	829.51	1109.64	9859047	77.1680
Morphine	2.338	2086481	∞	∞	136055	101.8964
Trazodone	4.634	37872467	11204412.43	1274037.02	17228221	94.4178

AM #25 Multi-Drug Screen Results



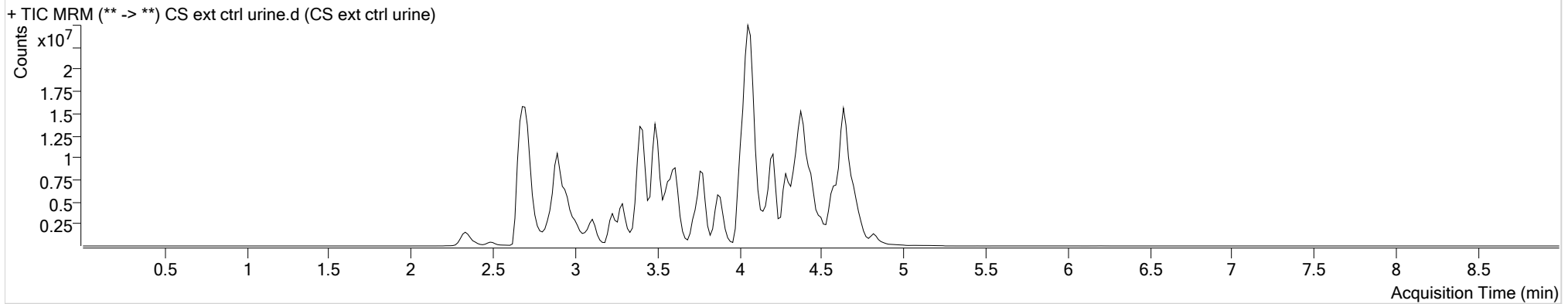
Batch results
Calibration Last Update

D:\MassHunter\Data\2019\AM 25\100119 MDS CS THCQ SP\QuantResults\AM 25 urines 100119 CS.batch.bin
10/29/2019 1:23:05 PM

Instrument Falco
Type Sample
Acq. Method am 25 all.m
Sample Position P2-D7
Injection Volume 5
Acq. Date-Time 10/1/2019 3:49:15 PM
Sample Info.

Data File CS ext ctrl urine.d
Sample CS ext ctrl urine
Operator
Comment

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Flunitrazepam	4.562	4143028	1540.46	134033.03	75187	123.8200
Metoprolol	3.431	4899143	882.63	1087.19	7828624	101.5938
Morphine	2.338	2004057	10432.34	∞	99198	134.2357
Trazodone	4.634	35013406	34515.15	468550.55	12170197	123.5684