

Worklist: 2173

<u>LAB CASE</u>	<u>ITEM</u>	<u>TASK ID</u>	<u>DESCRIPTION</u>	
M2017-5822	1	106942	AM 27 Blood THC Quant by LC	
M2017-5967	3	106943	AM 27 Blood THC Quant by LC	
M2018-0147	1	106944	AM 27 Blood THC Quant by LC	
M2018-0204	1	106945	AM 27 Blood THC Quant by LC	
P2018-0218	1	106946	AM 27 Blood THC Quant by LC	
P2018-0224	1	106947	AM 27 Blood THC Quant by LC	
P2018-0251	1	106948	AM 27 Blood THC Quant by LC	
P2018-0262	1	106949	AM 27 Blood THC Quant by LC	
P2018-0265	1	106950	AM 27 Blood THC Quant by LC	
P2018-0272	1	106951	AM 27 Blood THC Quant by LC	

AS

Quantitation of THC and Metabolites in Blood by LC-MS/MS

P

Extraction Date: 02/07/18

Analyst: Sarah Pickle

Plate lot#: 0515037

Plate Expiration: 09/28/18

Mobile phase A: 0.1% Formic Acid in LCMS Water
MTBE

Mobile phase B: 0.1% Formic acid in Acetonitrile
Hexane

Blank Blood Lot: 361331-3

Column: UCT Selectra DA 100 x 2.1mm 3um

LCMS-QQQ ID: 59740

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 **1000µL blood (calibrated pipette) Pipette ID: #27** in wells of analytical (standards) plate.
3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. *Shaker ID: 067105*
4. Pipette **500µL 0.1% formic acid in water** in wells of analytical plate.
5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
6. Transfer **800µL of blood+acid** 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 **2.25mL MTBE. (Add in 3 increments of 750uL)**
10. Wait 5 minutes.
11. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left).*
12. Add **2.25mL Hexane. (Add in 3 increments of 750uL)**
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 100% MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

Post-Analytic

1. Create batch and process data.
Worklist path: *020718 THC Quant SPTS* Batch Name: *020718 SP THC Quant*
2. Make any necessary integration changes, r^2 values ≥ 0.98 for each analyte.
3. Did all QCs pass for each analyte? Y/N Enter QCs into control charting?
4. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS:

Curve Range Limited: Carboxy-THC 10-250 due to low ratio.

Toxicology AM method 27 external prep information

Working Solution 1 ug/ml in MeOH C-THC, THC-OH, THC

Stock Solution 1mg/ml 10 ul THC, 100ug/ml 100ul THC-OH, C-THC in 9790 ul MeOH (Fisher Lot # 172516)

Prepared: 02/07/18 Expires: 02/07/19 By: TS

Drug	Lot	Expiration
C-THC	497429	N/A
THC	FE04231406	4/30/2019
THC-OH	FE01121503	1/31/2020

AM 27 control 100 ul working solution lot (WS020718) in 9900ul blood (Hemostat Lot# 361331-2)

Prepared: 02/07/18 Expires: 02/07/19 By: TS

ISP FORENSICS - Pocatello Instrument # 59740

Cannabinoids Analysis Report

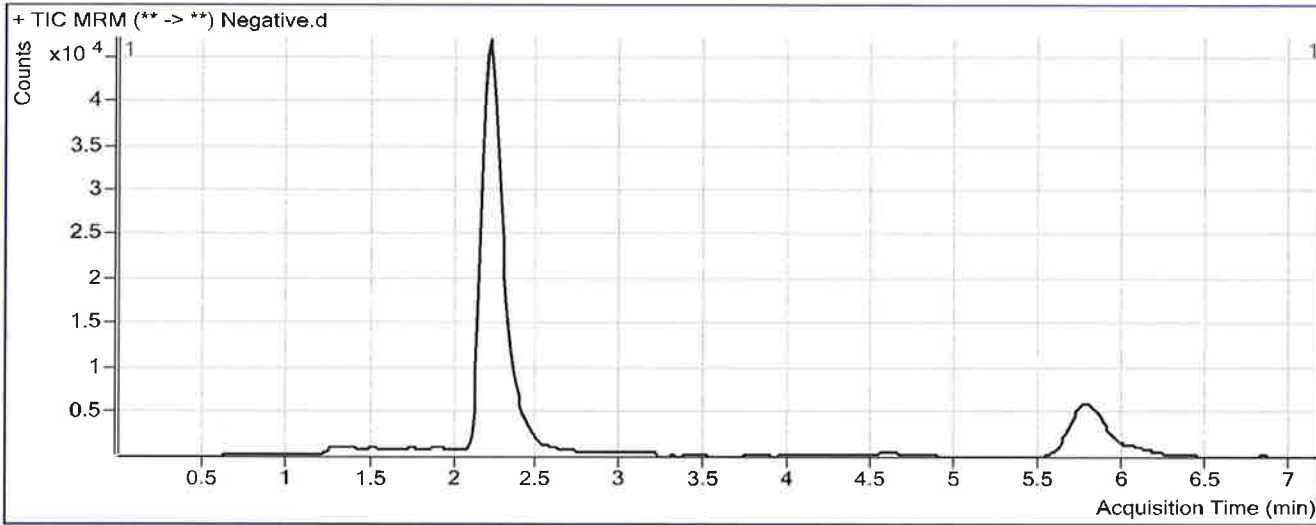
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Report Time	2/8/2018 8:35 AM	Reporter Name	ISPUser
Last Calib Update	2/8/2018 8:27 AM	Batch State	Processed

Analysis Info

Acq Time	2018-02-07 14:01	Data File	Negative.d
Sample Type	Sample	Sample Name	Negative
Dilution	1	Acq Method	THC Quant 051517 workingmm.m
Position	P1-A7	Sample Info	
Inj Vol	-1	Comment	Hemostat 361331-3

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-D3	2.399	2517	340586	0.0074	0.3397 <3
THC-COOH	THC-COOH-D9	2.299	3417	90577	0.0377	0.3130 <10

ISP FORENSICS - Pocatello Instrument # 59740

Cannabinoids Analysis Report

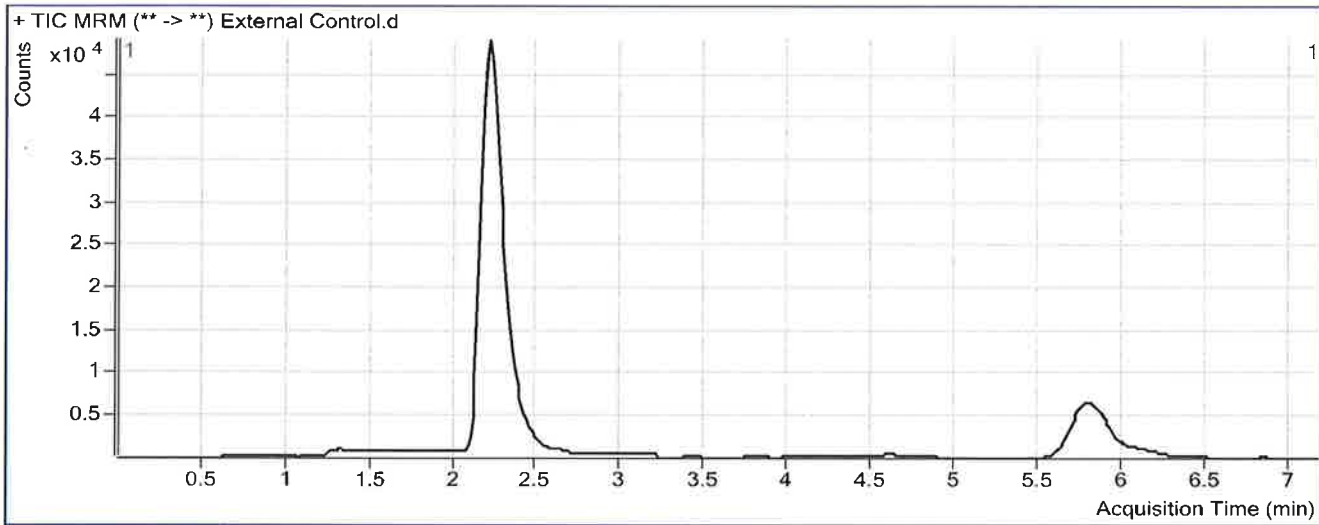
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Report Time	2/8/2018 8:35 AM	Reporter Name	ISPUser
Last Calib Update	2/8/2018 8:27 AM	Batch State	Processed

Analysis Info

Acq Time	2018-02-07 14:24	Data File	External Control.d
Sample Type	Sample	Sample Name	External Control
Dilution	1	Acq Method	THC Quant 051517 workingmm.m
Position	P1-B7	Sample Info	
Inj Vol	-1	Comment	Hemostat 361331-3 + WS 020718

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-D3	2.212	31778	327341	0.0971	8.0607
THC-COOH	THC-COOH-D9	2.312	19818	86908	0.2280	8.8384
THC	THC-D3	5.812	10866	100047	0.1086	9.6471

ISP FORENSICS - Pocatello Instrument # 59740

Cannabinoids Analysis Report

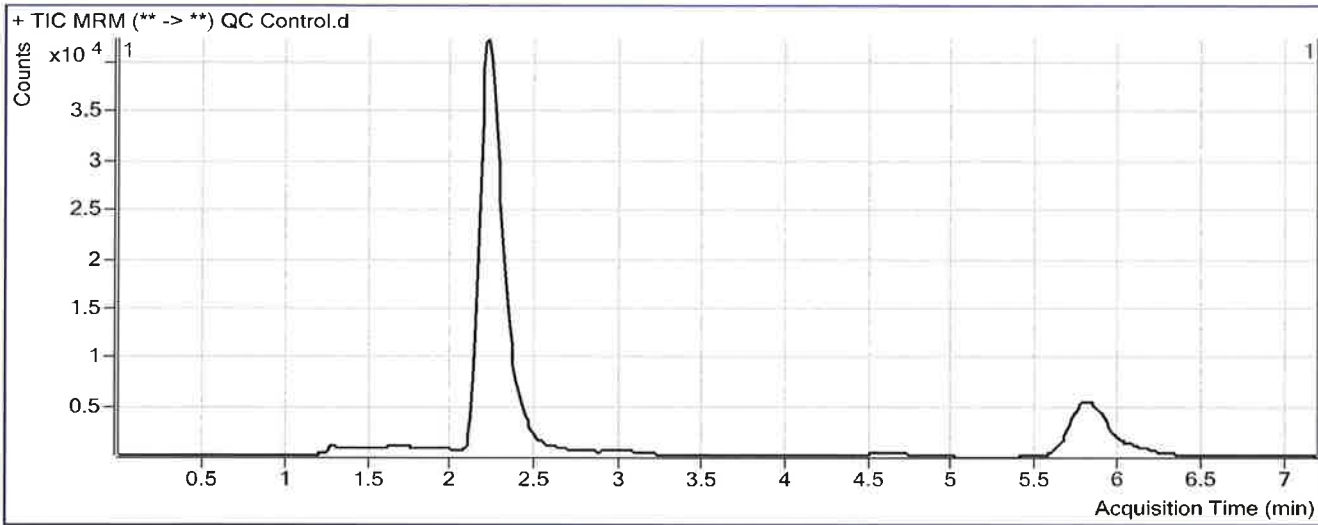
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Report Time	2/8/2018 8:35 AM	Reporter Name	ISPUser
Last Calib Update	2/8/2018 8:27 AM	Batch State	Processed

Analysis Info

Acq Time	2018-02-07 13:37	Data File	QC Control.d
Sample Type	Sample	Sample Name	QC Control
Dilution	1	Acq Method	THC Quant 051517 workingmm.m
Position	P1-H6	Sample Info	
Inj Vol	-1	Comment	

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-D3	2.225	33719	274840	0.1227	10.2650
THC-COOH	THC-COOH-D9	2.312	19798	67142	0.2949	11.8326
THC	THC-D3	5.839	9586	84283	0.1137	10.1282

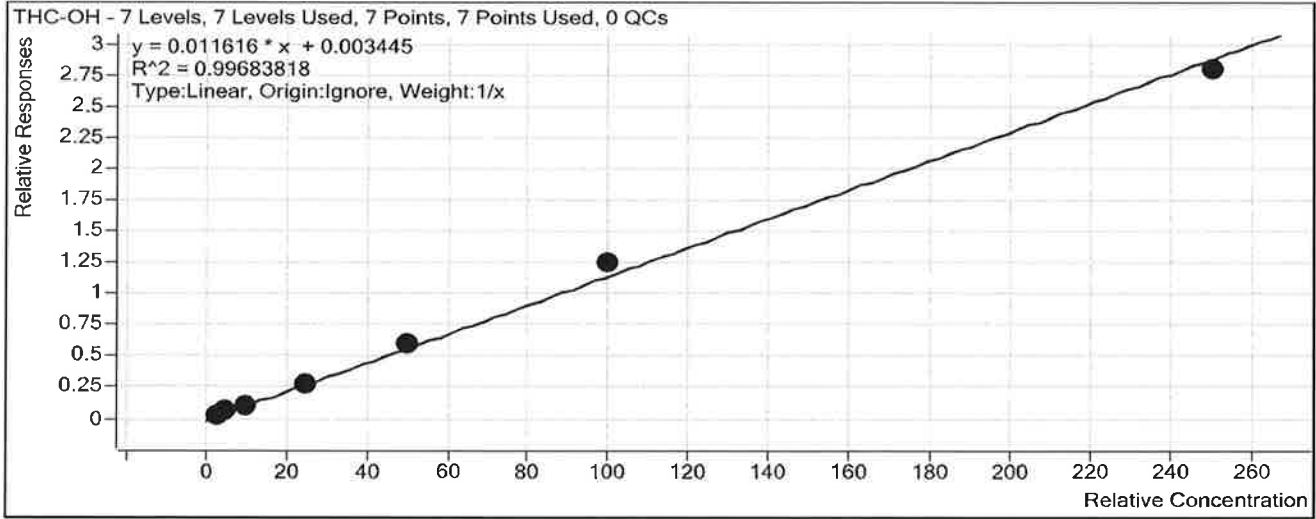
ISP Forensics Calibration Curve Report

S

Batch Data Path C:\MassHunter\Data\2018\THC Quant\020718 THC Quant SP TS\QuantResults\020718 SP
THC Quant.batch.bin

Last Calib Update 2/8/2018 8:27 AM **Analyst Name** ISP TOX

Target Compound *THC-OH*
Internal Standard *THC-OH-D3*

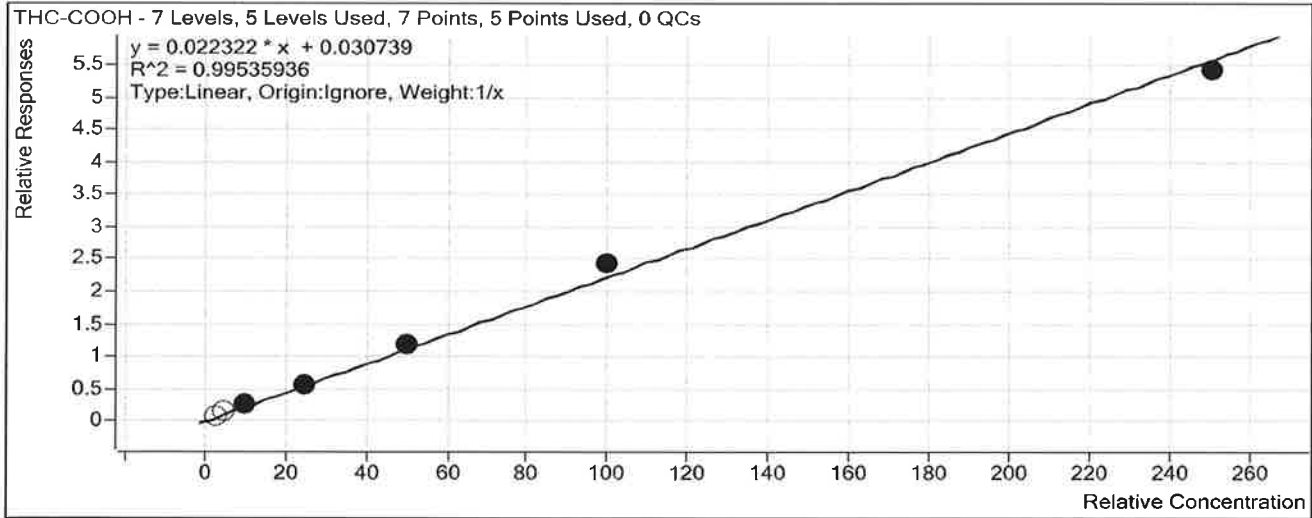


Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
Cal 1	1	<input checked="" type="checkbox"/>	3	2.9	96.9
Cal 2	2	<input checked="" type="checkbox"/>	5	5.2	103.3
Cal 3	3	<input checked="" type="checkbox"/>	10	9.5	94.7
Cal 4	4	<input checked="" type="checkbox"/>	25	24.1	96.3
Cal 5	5	<input checked="" type="checkbox"/>	50	52.0	104.0
Cal 6	6	<input checked="" type="checkbox"/>	100	108.4	108.4
Cal 7	7	<input checked="" type="checkbox"/>	250	241.0	96.4

ISP Forensics Calibration Curve Report

Batch Data Path C:\MassHunter\Data\2018\THC Quant\020718 THC Quant SP TS\QuantResults\020718 SP
THC Quant.batch.bin
Last Calib Update 2/8/2018 8:27 AM **Analyst Name** ISP TOX

Target Compound *THC-COOH*
Internal Standard *THC-COOH-D9*



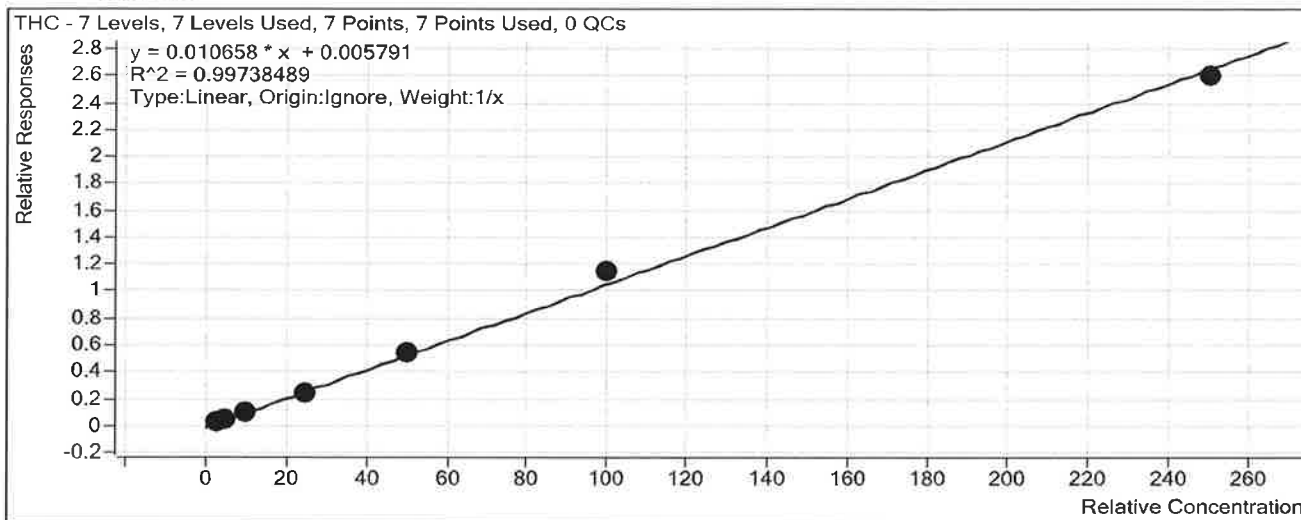
Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
Cal 1	1	<input type="checkbox"/>	3	3.0	101.7
Cal 2	2	<input type="checkbox"/>	5	4.9	97.2
Cal 3	3	<input checked="" type="checkbox"/>	10	9.8	97.9
Cal 4	4	<input checked="" type="checkbox"/>	25	23.1	92.3
Cal 5	5	<input checked="" type="checkbox"/>	50	52.3	104.6
Cal 6	6	<input checked="" type="checkbox"/>	100	108.8	108.8
Cal 7	7	<input checked="" type="checkbox"/>	250	241.0	96.4

ISP Forensics Calibration Curve Report

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Batch Data Path C:\MassHunter\Data\2018\THC Quant\020718 THC Quant SP TS\QuantResults\020718 SP
THC Quant.batch.bin
Last Calib Update 2/8/2018 8:27 AM **Analyst Name** ISP TOX

Target Compound THC
Internal Standard THC-D3



Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
Cal 1	1	<input checked="" type="checkbox"/>	3	3.1	104.6
Cal 2	2	<input checked="" type="checkbox"/>	5	4.9	98.4
Cal 3	3	<input checked="" type="checkbox"/>	10	9.8	97.9
Cal 4	4	<input checked="" type="checkbox"/>	25	22.9	91.5
Cal 5	5	<input checked="" type="checkbox"/>	50	51.4	102.7
Cal 6	6	<input checked="" type="checkbox"/>	100	107.6	107.6
Cal 7	7	<input checked="" type="checkbox"/>	250	243.4	97.3

ISP FORENSICS - Pocatello Instrument # 59740

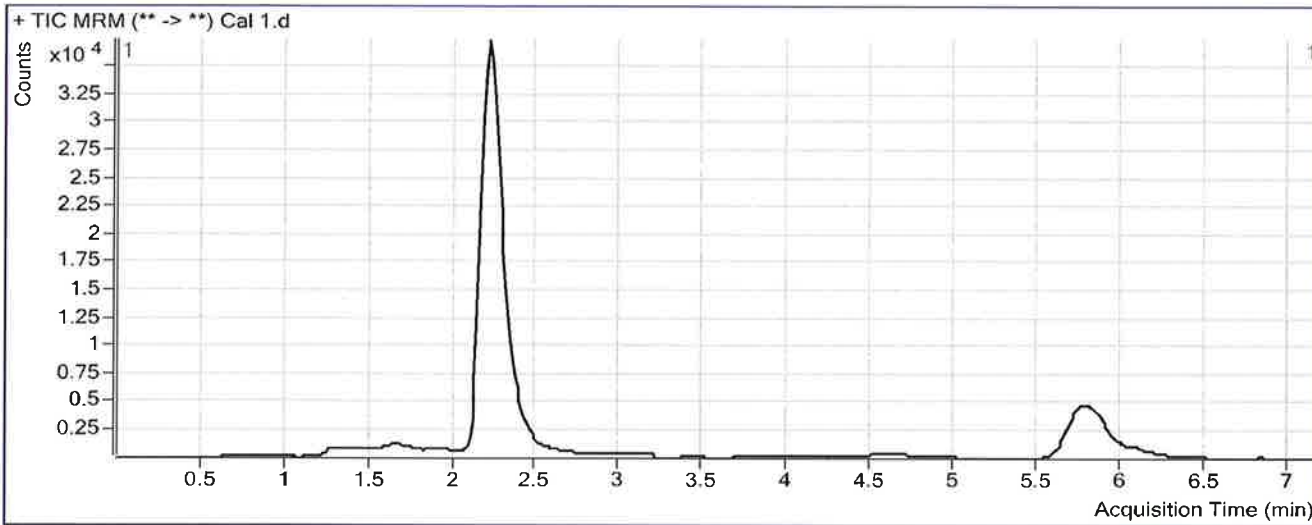
Cannabinoids Analysis Report

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Analysis Time	2/8/2018 8:27 AM	Analyst Name	ISPUser
Report Time	2/8/2018 8:34 AM	Reporter Name	ISPUser
Last Calib Update	2/8/2018 8:27 AM	Batch State	Processed

Analysis Info

Acq Time	2018-02-07 12:02	Data File	Cal 1.d
Sample Type	Calibration	Sample Name	Cal 1
Dilution	1	Acq Method	THC Quant 051517 workingmm.m
Position	P1-A6	Sample Info	
Inj Vol	-1	Comment	

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-D3	2.225	9826	264079	0.0372	2.9067
THC-COOH	THC-COOH-D9	2.312	7149	72352	0.0988	3.0497
THC	THC-D3	5.825	3259	83085	0.0392	3.1370

ISP FORENSICS - Pocatello Instrument # 59740

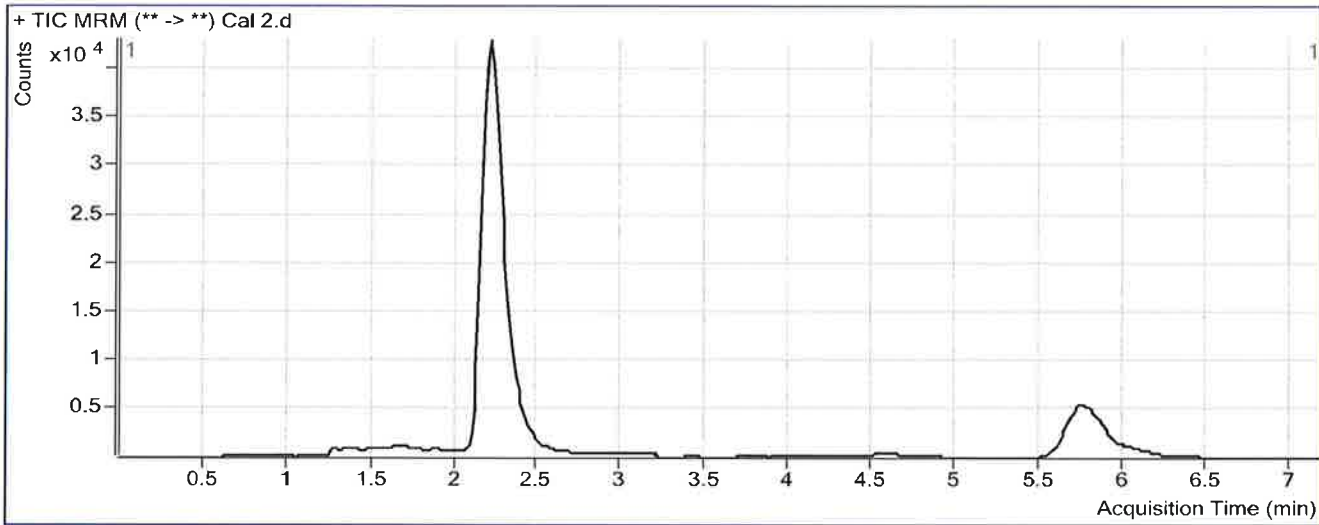
Cannabinoids Analysis Report

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Report Time	2/8/2018 8:34 AM	Reporter Name	ISPUser
Last Calib Update	2/8/2018 8:27 AM	Batch State	Processed

Analysis Info

Acq Time	2018-02-07 12:14	Data File	Cal 2.d
Sample Type	Calibration	Sample Name	Cal 2
Dilution	1	Acq Method	THC Quant 051517 workingmm.m
Position	P1-B6	Sample Info	
Inj Vol	-1	Comment	

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-D3	2.212	18485	291439	0.0634	5.1636
THC-COOH	THC-COOH-D9	2.312	11415	81990	0.1392	4.8600
THC	THC-D3	5.812	5190	89129	0.0582	4.9199

ISP FORENSICS - Pocatello Instrument # 59740

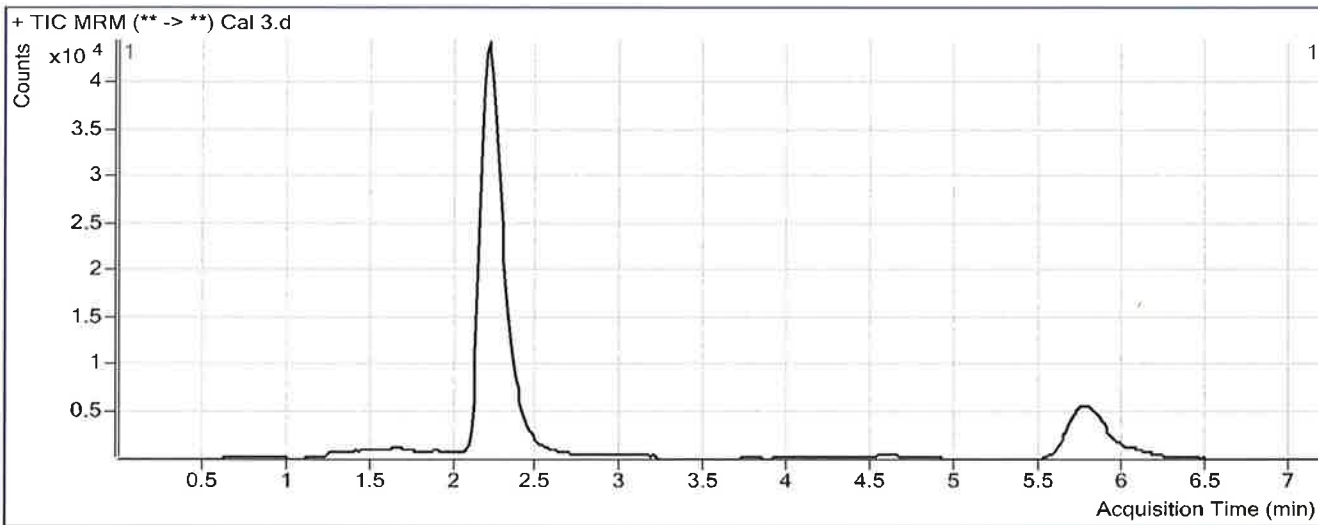
Cannabinoids Analysis Report

Batch Data Path	C:\MassHunter\Data\2018\THC Quant\020718 THC Quant SP TS\QuantResults\020718 SP THC Quant.batch.bi		
Analysis Time	2/8/2018 8:27 AM	Analyst Name	ISPUser
Report Time	2/8/2018 8:34 AM	Reporter Name	ISPUser
Last Calib Update	2/8/2018 8:27 AM	Batch State	Processed

Analysis Info

Acq Time	2018-02-07 12:26	Data File	Cal 3.d
Sample Type	Calibration	Sample Name	Cal 3
Dilution	1	Acq Method	THC Quant 051517 workingmm.m
Position	P1-C6	Sample Info	
Inj Vol	-1	Comment	

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-D3	2.212	32675	287927	0.1135	9.4729
THC-COOH	THC-COOH-D9	2.299	19302	77431	0.2493	9.7902
THC	THC-D3	5.799	9610	87226	0.1102	9.7933

ISP FORENSICS - Pocatello Instrument # 59740

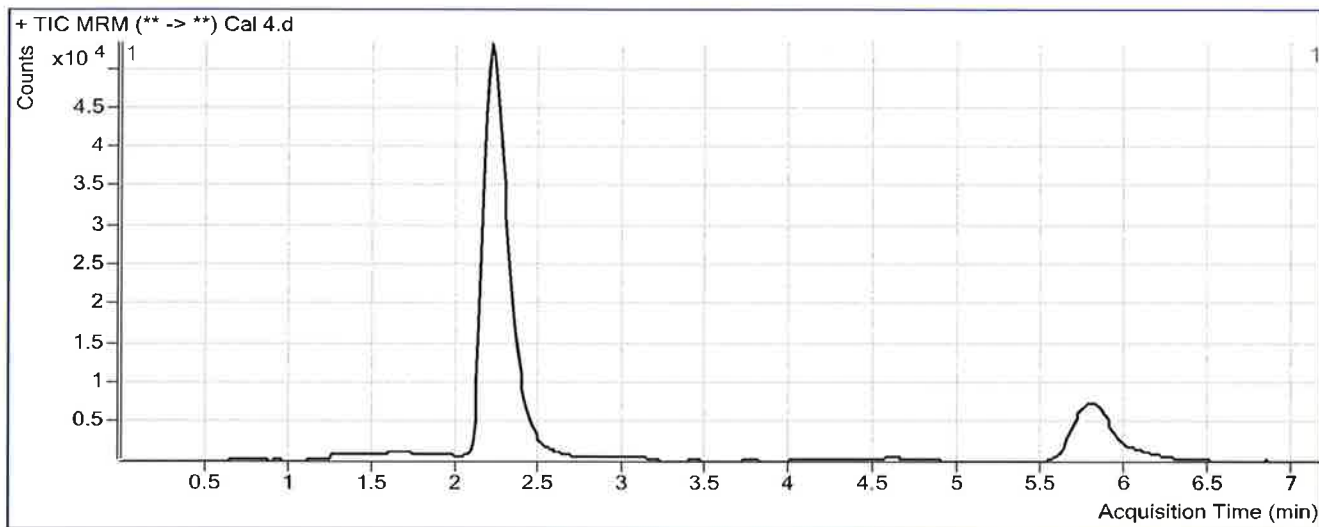
Cannabinoids Analysis Report

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Report Time	2/8/2018 8:34 AM	Reporter Name	ISPUser
Last Calib Update	2/8/2018 8:27 AM	Batch State	Processed

Analysis Info

Acq Time	2018-02-07 12:38	Data File	Cal 4.d
Sample Type	Calibration	Sample Name	Cal 4
Dilution	1	Acq Method	THC Quant 051517 workingmm.m
Position	P1-D6	Sample Info	
Inj Vol	-1	Comment	

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-D3	2.212	84258	297635	0.2831	24.0738
THC-COOH	THC-COOH-D9	2.312	45220	82863	0.5457	23.0706
THC	THC-D3	5.839	23244	93152	0.2495	22.8689

ISP FORENSICS - Pocatello Instrument # 59740

Cannabinoids Analysis Report

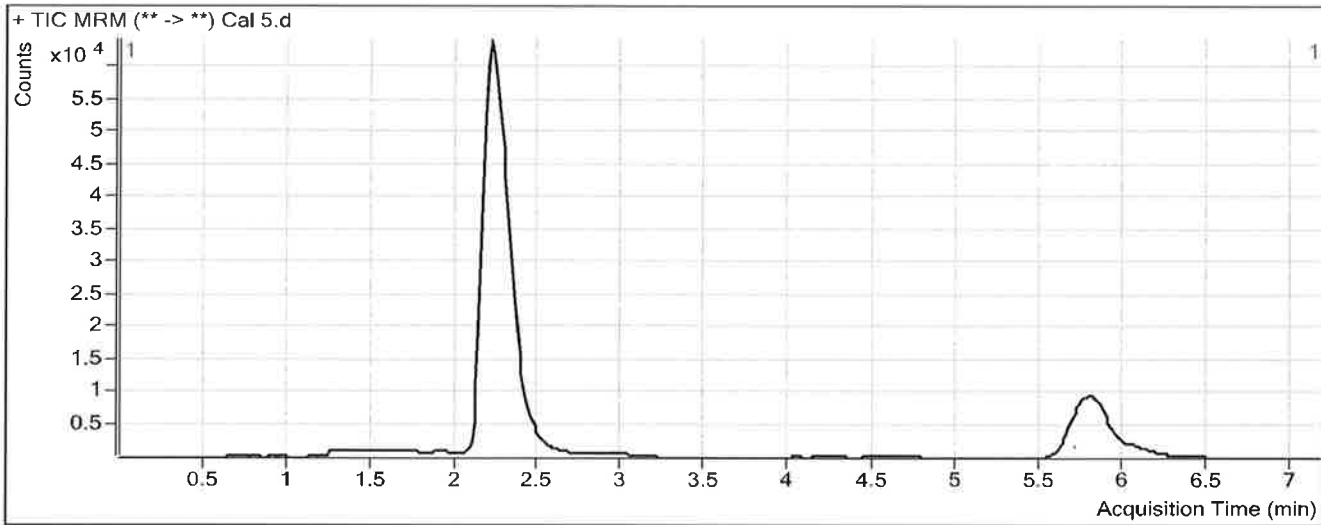
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Report Time	2/8/2018 8:34 AM	Reporter Name	ISPUser
Last Calib Update	2/8/2018 8:27 AM	Batch State	Processed

Analysis Info

Acq Time	2018-02-07 12:50	Data File	Cal 5.d
Sample Type	Calibration	Sample Name	Cal 5
Dilution	1	Acq Method	THC Quant 051517 workingmm.m
Position	P1-E6	Sample Info	
Inj Vol	-1	Comment	

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-D3	2.212	170802	281125	0.6076	52.0069
THC-COOH	THC-COOH-D9	2.312	89703	74876	1.1980	52.2930
THC	THC-D3	5.825	47107	85156	0.5532	51.3582

ISP FORENSICS - Pocatello Instrument # 59740

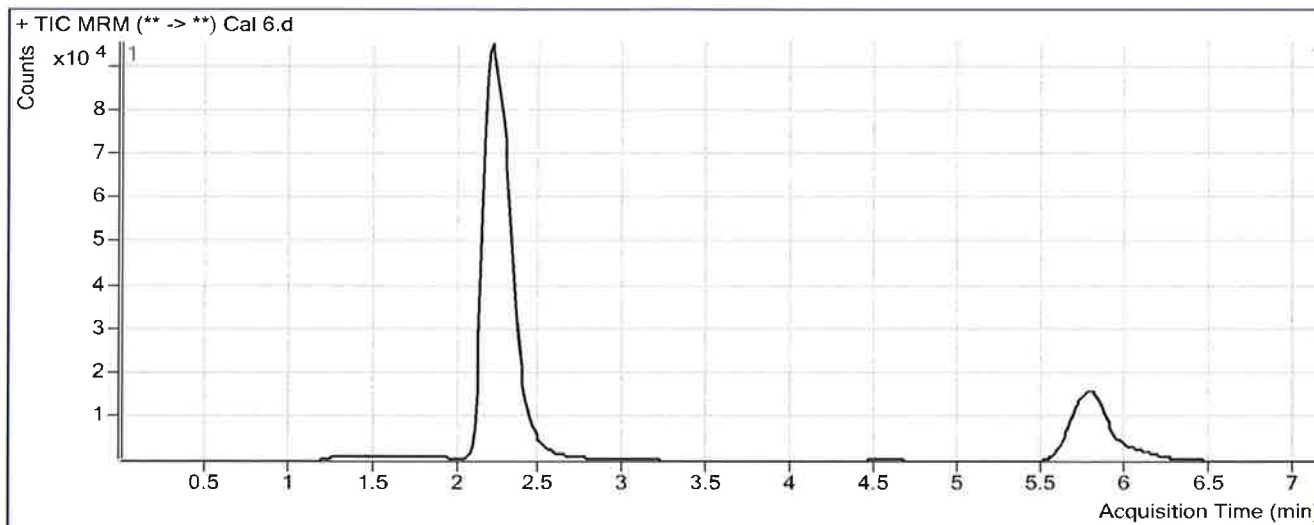
Cannabinoids Analysis Report

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Report Time	2/8/2018 8:34 AM	Reporter Name	ISPUser
Last Calib Update	2/8/2018 8:27 AM	Batch State	Processed

Analysis Info

Acq Time	2018-02-07 13:01	Data File	Cal 6.d
Sample Type	Calibration	Sample Name	Cal 6
Dilution	1	Acq Method	THC Quant 051517 workingmm.m
Position	P1-F6	Sample Info	
Inj Vol	-1	Comment	

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-D3	2.199	369099	292289	1.2628	108.4132
THC-COOH	THC-COOH-D9	2.299	188046	76447	2.4598	108.8189
THC	THC-D3	5.799	104175	90407	1.1523	107.5687

ISP FORENSICS - Pocatello Instrument # 59740

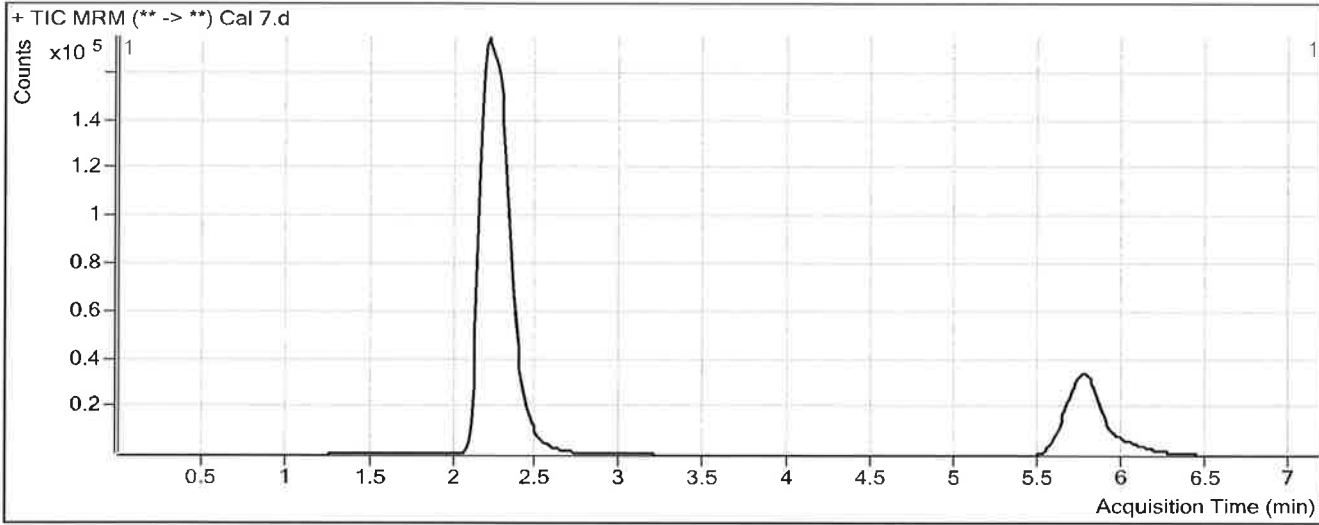
Cannabinoids Analysis Report

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Report Time	2/8/2018 8:35 AM	Reporter Name	ISPUser
Last Calib Update	2/8/2018 8:27 AM	Batch State	Processed

Analysis Info

Acq Time	2018-02-07 13:13	Data File	Cal 7.d
Sample Type	Calibration	Sample Name	Cal 7
Dilution	1	Acq Method	THC Quant 051517 workingmm.m
Position	P1-G6	Sample Info	
Inj Vol	-1	Comment	

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-D3	2.199	910053	324728	2.8025	240.9629
THC-COOH	THC-COOH-D9	2.299	442935	81859	5.4110	241.0274
THC	THC-D3	5.772	263720	101449	2.5995	243.3540