3/2/2017

Worklist: 1585

central data reviewed by B. Wylie on 3/3/17

LAB_CASE	ITEM	TASK_ID	DESCRIPTION
C2017-0126	1	78193	AM 27 Blood THC Quant by LC
C2017-0148	1	78194	AM 27 Blood THC Quant by LC
C2017-0181	1	78195	AM 27 Blood THC Quant by LC
C2017-0225	2	78196	AM 27 Blood THC Quant by LC
M2017-0400	1	78203	AM 27 Blood THC Quant by LC
M2017-0449	2	78197	AM 27 Blood THC Quant by LC
M2017-0561	3	78198	AM 27 Blood THC Quant by LC
P2017-0149	1	78199	AM 27 Blood THC Quant by LC
P2017-0182	1	78200	AM 27 Blood THC Quant by LC
P2017-0197	1	78201	AM 27 Blood THC Quant by LC
P2017-0348	1	78202	AM 27 Blood THC Quant by LC

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

Extraction Date: 2-28-17 **Analyst:** Anne Nord

PRE-ANALYTIC

Plate Lot# Custom - 0490364 Plate Exp. 9-21-2017 **External QC** Lot 31317, exp 3-13-17

√ 1. Ensure all solutions are within expiration date.

- Mobile Phase A: ***0.1% Formic Acid in LCMS Water***
- Mobile Phase B: ***0.1% Formic Acid in LCMS Acetonitrile***
- ***LCMS Methanol***
- **Blank/Negative Blood: Lot *321632***
- ***0.1% Formic Acid in water***
- ***MTBE***
- ***Hexane***

Column: ***UCT Selectra DA 100 x 2.1 mm 3um***

√ 2. Check levels of mobile phases and needle wash and refill as necessary. Ensure waste is not full.

√ 3. Purge Pump and Load appropriate Acq. Method, allow system to equilibrate for approx. 30 min.

√ 4. Create worklist. Data path name: 2-28-17 THC Quant

ANALYTIC

√ 1. Remove standards plate, blood, and samples from cold storage. Allow to reach room temperature.

√ 2. Add ***1000 µL blood*** to wells of analytical (standards) plate. Mix via aspirate and dispense. Place cover on Plate
Blank blood for locations containing standards/QCs and internal standards
Sample blood for locations containing only internal standards

√ 3. Place on shaking incubator at ambient temp., **900rpm for 15 minutes**. *Shaker ID 66759*

√ 4. Pipette ***500µL 0.1% formic acid*** to all wells of standards 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). Wait 5 min. ***(Load blood samples at 85- 100 PSI- Selector to Right)***

√ 8. Add ***2.25mL MTBE*** and allow to flow under gravity for 5 minutes. ***(add in 3 increments of 750uL)***

√ 9. Apply positive pressure for approx. 15 seconds ***(10-15 PSI- Selector to left -.***

√ 10. Add ***2.25mL Hexane*** and allow to flow under gravity for 5 minutes.. ***(add in 3 increments of 750uL)***

√ 11. Apply positive pressure for approx. 15 seconds. ***(10-15 PSI Selector to the left)***

√ 12. Remove collection plate containing eluate.

√ 13. Place collection plate on SPE Dry and evaporate to dryness at approx. 35°C. *SPE Dry ID 66819*

√ 14. Reconstitute in ***100 µL 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.
Batch name: 022817 Quant cannabinoid

√ 2. Make any necessary integration changes. Limit curves based on validated linear ranges (3-50ng/mL).

√ 3. Were all appropriate standards used in the curve for each analyte? Y / N
Are r^2 values ≥0.98 for each analyte? Y / N

√ 4. Did all QCs pass for each analyte? Y / N Were QCs entered into QC charting? Y / N

√ 5. Central File Packet to include: √ LIMS Worklist: √ Method Checklist √ Calibration and Control Reports

COMMENTS

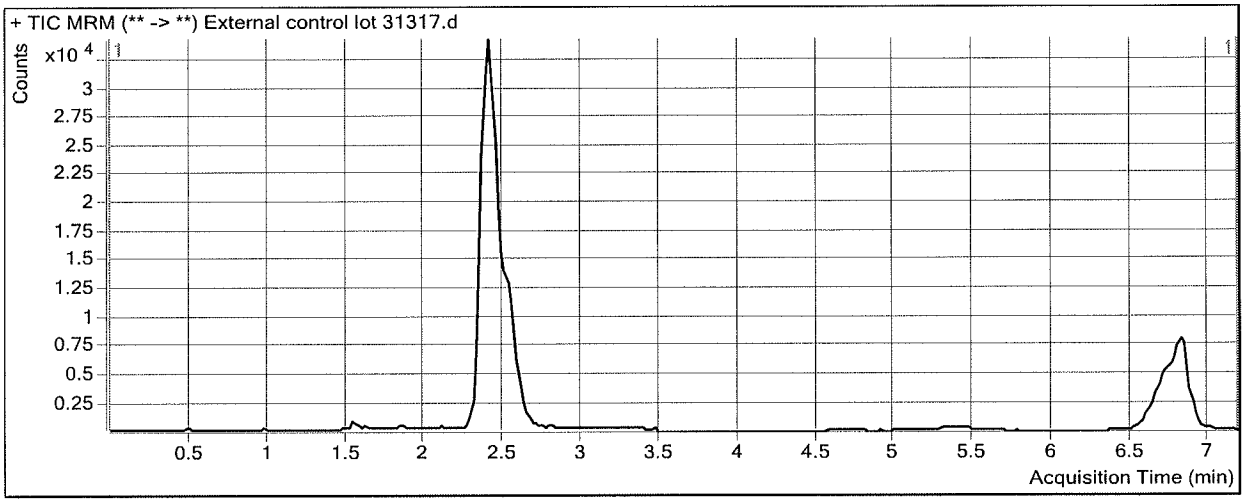
ISP FORENSICS - Cd'A Instrument # 62340
Cannabinoids Analysis Report

Batch Data Path	D:\2017 Data\2-28-17 THC Quant\QuantResults\022817 quant cannabiniod.batch.bin		
Analysis Time	3/1/2017 2:03 PM	**Analyst Name**	ISP Tox
Report Time	3/2/2017 4:58 PM	**Reporter Name**	ISP Tox
Last Calib Update	3/1/2017 2:03 PM	**Batch State**	Processed

Analysis Info

Acq Time	2017-02-28 15:27	**Data File**	External control lot 31317.d
Sample Type	Sample	**Sample Name**	External control lot 31317
Dilution	1	**Acq Method**	Quant THC 2017.m
Position	p2b2	**Sample Info**	
Inj Vol	-1	**Comment**	AM 27 cannabinoid confirmation 10 ng

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-d3	2.436	19943	213075	0.0936	9.4753
THC-COOH	THC-COOH-d9	2.566	9801	65666	0.1492	7.8024
THC	THC-d3	6.813	7825	86057	0.0909	8.5483

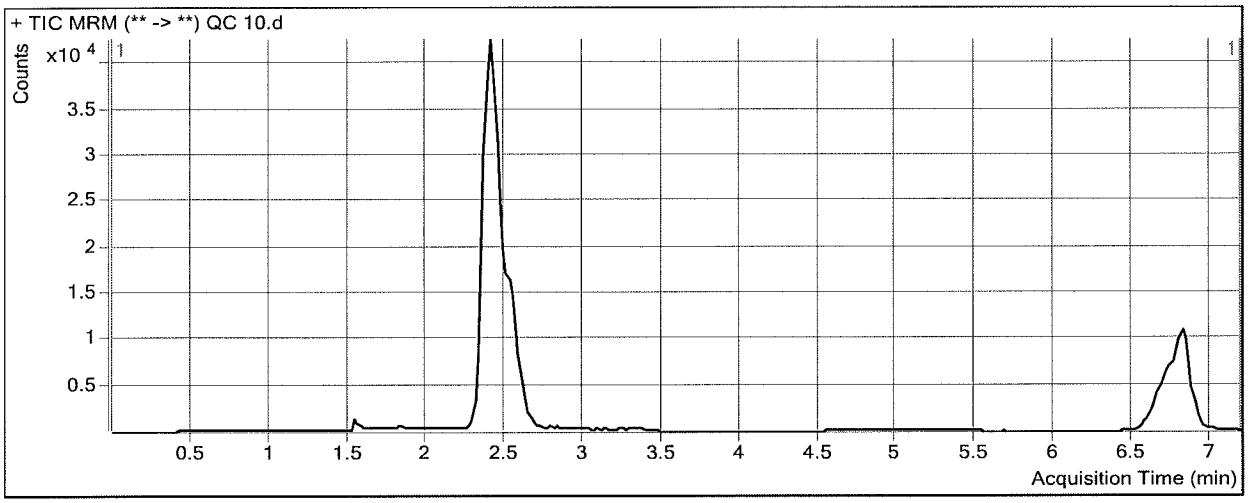
ISP FORENSICS - Cd'A Instrument # 62340
Cannabinoids Analysis Report

Batch Data Path	D:\2017 Data\2-28-17 THC Quant\QuantResults\022817 quant cannabiniod.batch.bin		
Analysis Time	3/1/2017 2:03 PM	**Analyst Name**	ISP Tox
Report Time	3/2/2017 4:58 PM	**Reporter Name**	ISP Tox
Last Calib Update	3/1/2017 2:03 PM	**Batch State**	Processed

Analysis Info

Acq Time	2017-02-28 15:15	**Data File**	QC 10.d
Sample Type	QC	**Sample Name**	QC 10
Dilution	1	**Acq Method**	Quant THC 2017.m
Position	P2-H1	**Sample Info**	
Inj Vol	-1	**Comment**	AM 27 cannabinoid confirmation

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-d3	2.436	24949	267239	0.0934	9.4548
THC-COOH	THC-COOH-d9	2.566	12744	80552	0.1582	8.2198
THC	THC-d3	6.833	11284	107734	0.1047	9.6921

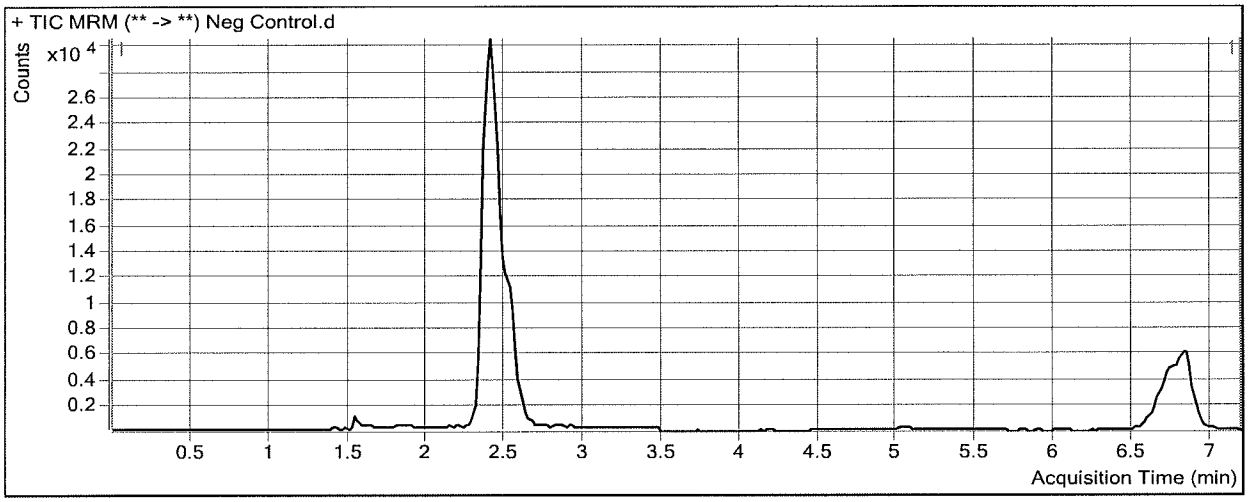
ISP FORENSICS - Cd'A Instrument # 62340
Cannabinoids Analysis Report

Batch Data Path	D:\2017 Data\2-28-17 THC Quant\QuantResults\022817 quant cannabiniod.batch.bin		
Analysis Time	3/1/2017 2:03 PM	**Analyst Name**	ISP Tox
Report Time	3/2/2017 4:58 PM	**Reporter Name**	ISP Tox
Last Calib Update	3/1/2017 2:03 PM	**Batch State**	Processed

Analysis Info

Acq Time	2017-02-28 15:03	**Data File**	Neg Control.d
Sample Type	Sample	**Sample Name**	Neg Control
Dilution	1	**Acq Method**	Quant THC 2017.m
Position	P2-a2	**Sample Info**	
Inj Vol	-1	**Comment**	AM 27 cannabinoid confirmation

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-d3	2.676	310	208302	0.0015	1.5290

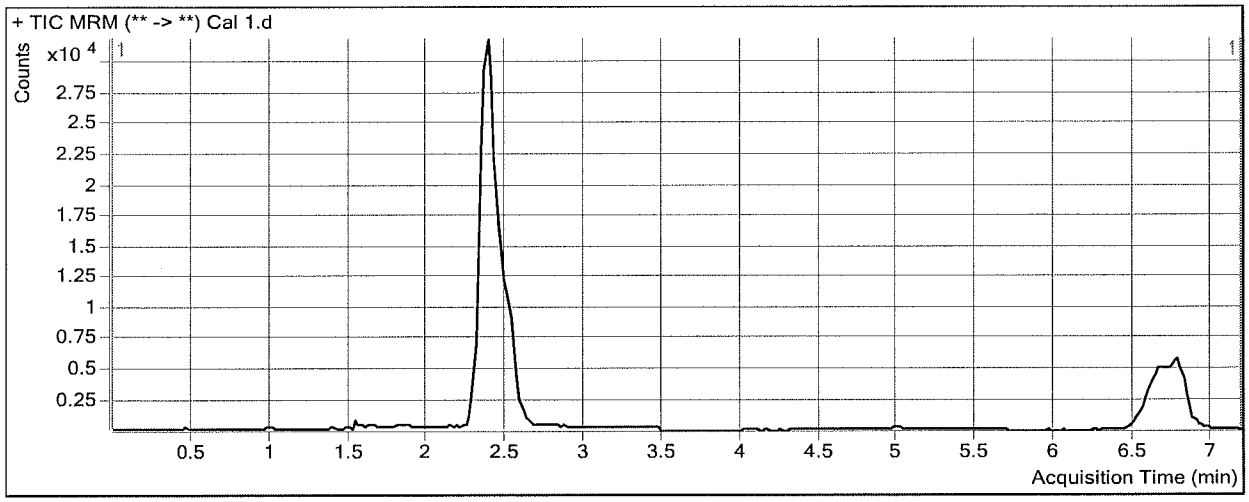
ISP FORENSICS - Cd'A Instrument # 62340
Cannabinoids Analysis Report

Batch Data Path	D:\2017 Data\2-28-17 THC Quant\QuantResults\022817 quant cannabiniod.batch.bin		
Analysis Time	3/1/2017 2:03 PM	**Analyst Name**	ISP Tox
Report Time	3/2/2017 4:58 PM	**Reporter Name**	ISP Tox
Last Calib Update	3/1/2017 2:03 PM	**Batch State**	Processed

Analysis Info

Acq Time	2017-02-28 13:28	**Data File**	Cal 1.d
Sample Type	Calibration	**Sample Name**	Cal 1
Dilution	1	**Acq Method**	Quant THC 2017.m
Position	P2-A1	**Sample Info**	
Inj Vol	-1	**Comment**	AM 27 cannabinoid confirmation

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-d3	2.396	4937	210427	0.0235	3.4247
THC-COOH	THC-COOH-d9	2.546	3542	63227	0.0560	3.4621
THC	THC-d3	6.753	2224	87583	0.0254	3.1214

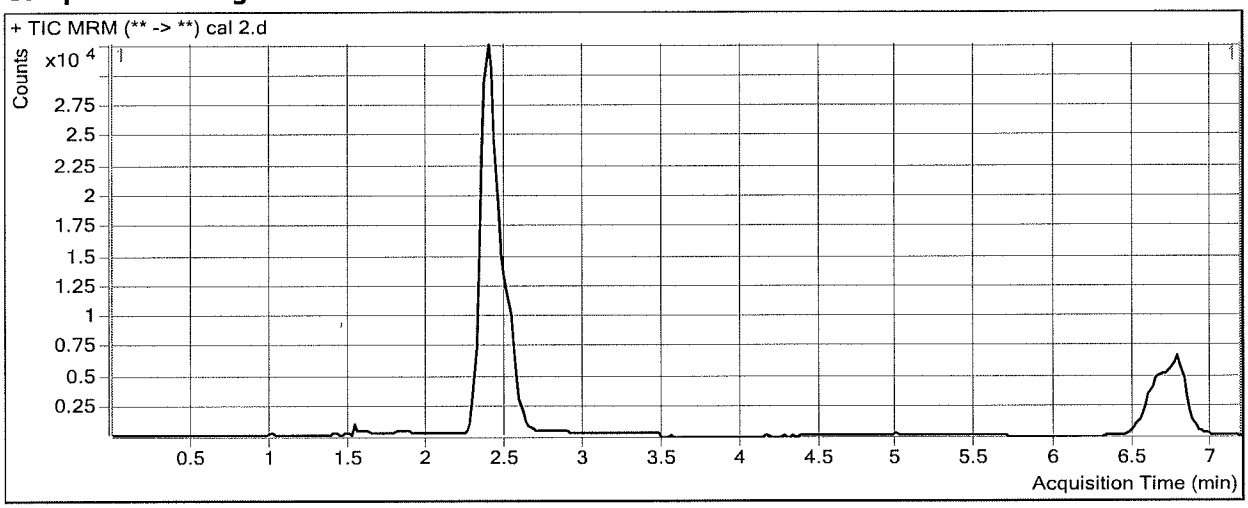
ISP FORENSICS - Cd'A Instrument # 62340
Cannabinoids Analysis Report

Batch Data Path	D:\2017 Data\2-28-17 THC Quant\QuantResults\022817 quant cannabiniod.batch.bin		
Analysis Time	3/1/2017 2:03 PM	**Analyst Name**	ISP Tox
Report Time	3/2/2017 4:58 PM	**Reporter Name**	ISP Tox
Last Calib Update	3/1/2017 2:03 PM	**Batch State**	Processed

Analysis Info

Acq Time	2017-02-28 13:40	**Data File**	cal 2.d
Sample Type	Calibration	**Sample Name**	cal 2
Dilution	1	**Acq Method**	Quant THC 2017.m
Position	P2-B1	**Sample Info**	
Inj Vol	-1	**Comment**	AM 27 cannabinoid confirmation

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-d3	2.396	9142	218083	0.0419	5.0172
THC-COOH	THC-COOH-d9	2.546	5707	63751	0.0895	5.0217
THC	THC-d3	6.773	4241	87273	0.0486	5.0421

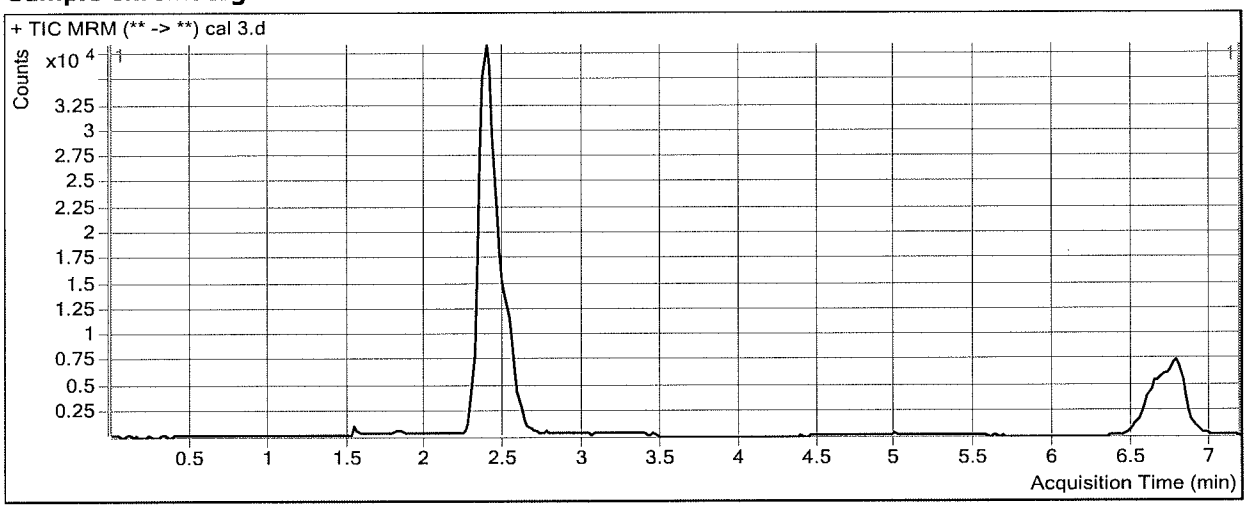
ISP FORENSICS - Cd'A Instrument # 62340
Cannabinoids Analysis Report

Batch Data Path	D:\2017 Data\2-28-17 THC Quant\QuantResults\022817 quant cannabiniod.batch.bin		
Analysis Time	3/1/2017 2:03 PM	**Analyst Name**	ISP Tox
Report Time	3/2/2017 4:58 PM	**Reporter Name**	ISP Tox
Last Calib Update	3/1/2017 2:03 PM	**Batch State**	Processed

Analysis Info

Acq Time	2017-02-28 13:52	**Data File**	cal 3.d
Sample Type	Calibration	**Sample Name**	cal 3
Dilution	1	**Acq Method**	Quant THC 2017.m
Position	P2-C1	**Sample Info**	
Inj Vol	-1	**Comment**	AM 27 cannabinoid confirmation

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-d3	2.416	21142	249085	0.0849	8.7234
THC-COOH	THC-COOH-d9	2.546	11534	66758	0.1728	8.8975
THC	THC-d3	6.773	9398	99517	0.0944	8.8389

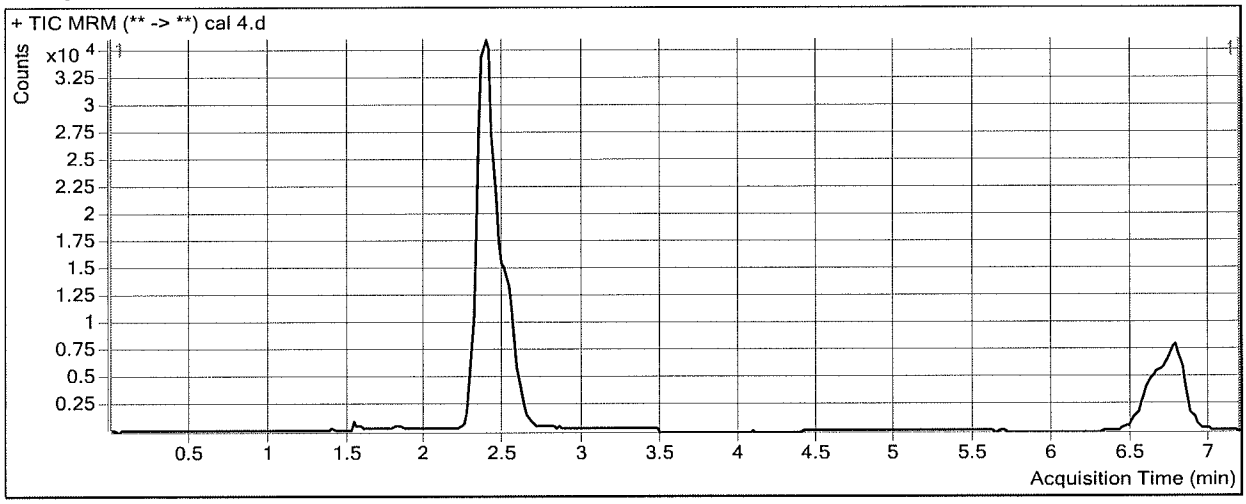
ISP FORENSICS - Cd'A Instrument # 62340
Cannabinoids Analysis Report

Batch Data Path	D:\2017 Data\2-28-17 THC Quant\QuantResults\022817 quant cannabiniod.batch.bin		
Analysis Time	3/1/2017 2:03 PM	**Analyst Name**	ISP Tox
Report Time	3/2/2017 4:58 PM	**Reporter Name**	ISP Tox
Last Calib Update	3/1/2017 2:03 PM	**Batch State**	Processed

Analysis Info

Acq Time	2017-02-28 14:04	**Data File**	cal 4.d
Sample Type	Calibration	**Sample Name**	cal 4
Dilution	1	**Acq Method**	Quant THC 2017.m
Position	P2-D1	**Sample Info**	
Inj Vol	-1	**Comment**	AM 27 cannabinoid confirmation

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-d3	2.396	46876	214851	0.2182	20.2233
THC-COOH	THC-COOH-d9	2.546	25953	62078	0.4181	20.3168
THC	THC-d3	6.773	20719	88876	0.2331	20.3249

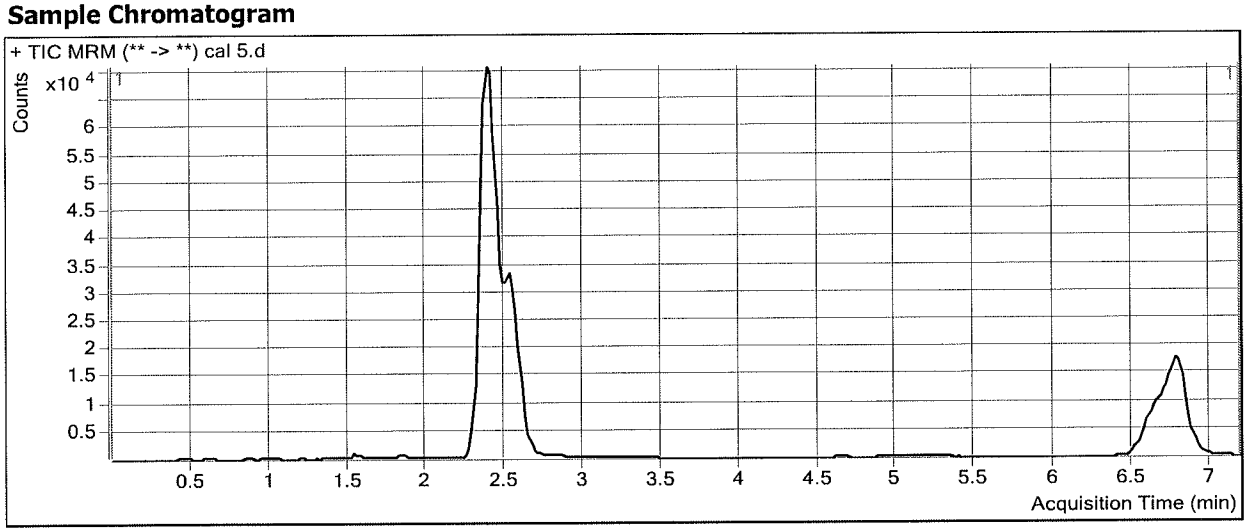
ISP FORENSICS - Cd'A Instrument # 62340
Cannabinoids Analysis Report

Batch Data Path	D:\2017 Data\2-28-17 THC Quant\QuantResults\022817 quant cannabiniod.batch.bin		
Analysis Time	3/1/2017 2:03 PM	**Analyst Name**	ISP Tox
Report Time	3/2/2017 4:58 PM	**Reporter Name**	ISP Tox
Last Calib Update	3/1/2017 2:03 PM	**Batch State**	Processed

Analysis Info

Acq Time	2017-02-28 14:16	**Data File**	cal 5.d
Sample Type	Calibration	**Sample Name**	cal 5
Dilution	1	**Acq Method**	Quant THC 2017.m
Position	P2-E1	**Sample Info**	
Inj Vol	-1	**Comment**	AM 27 cannabinoid confirmation

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-d3	2.416	197131	298294	0.6609	58.4138
THC-COOH	THC-COOH-d9	2.546	104042	85127	1.2222	57.7521
THC	THC-d3	6.793	85042	124068	0.6854	57.7847

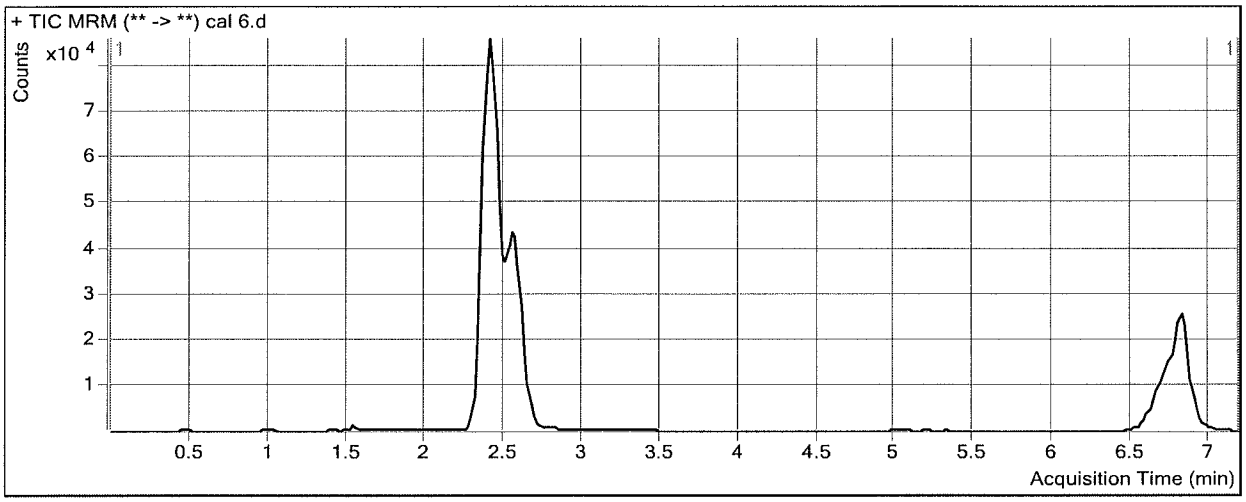
ISP FORENSICS - Cd'A Instrument # 62340
Cannabinoids Analysis Report

Batch Data Path	D:\2017 Data\2-28-17 THC Quant\QuantResults\022817 quant cannabiniod.batch.bin		
Analysis Time	3/1/2017 2:03 PM	**Analyst Name**	ISP Tox
Report Time	3/2/2017 4:58 PM	**Reporter Name**	ISP Tox
Last Calib Update	3/1/2017 2:03 PM	**Batch State**	Processed

Analysis Info

Acq Time	2017-02-28 14:28	**Data File**	cal 6.d
Sample Type	Calibration	**Sample Name**	cal 6
Dilution	1	**Acq Method**	Quant THC 2017.m
Position	P2-F1	**Sample Info**	
Inj Vol	-1	**Comment**	AM 27 cannabinoid confirmation

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-d3	2.416	315570	268545	1.1751	102.7783
THC-COOH	THC-COOH-d9	2.566	156568	74268	2.1081	98.9957
THC	THC-d3	6.813	132249	103513	1.2776	106.8250

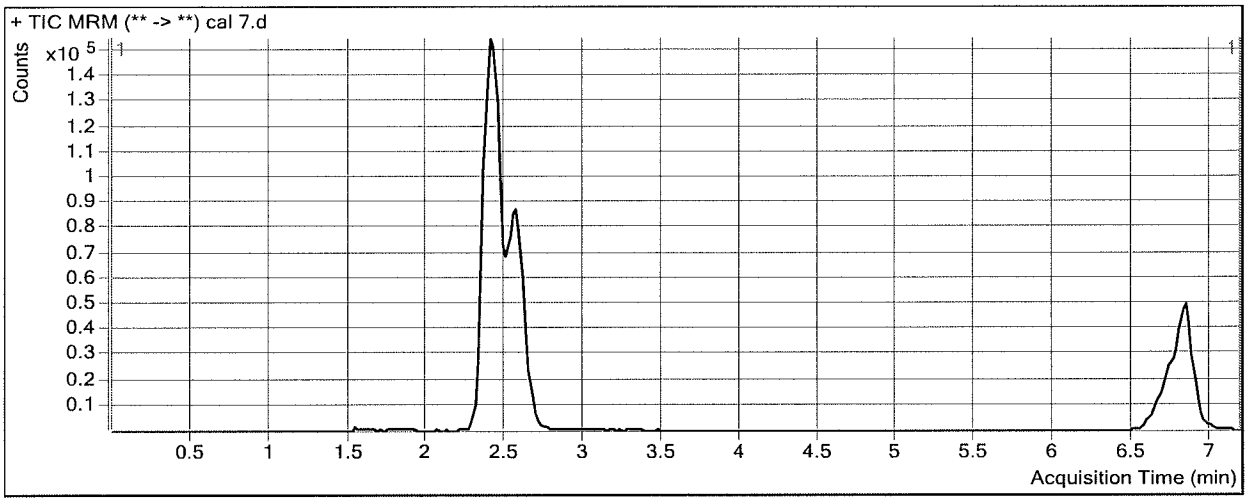
ISP FORENSICS - Cd'A Instrument # 62340
Cannabinoids Analysis Report

Batch Data Path	D:\2017 Data\2-28-17 THC Quant\QuantResults\022817 quant cannabiniod.batch.bin		
Analysis Time	3/1/2017 2:03 PM	**Analyst Name**	ISP Tox
Report Time	3/2/2017 4:58 PM	**Reporter Name**	ISP Tox
Last Calib Update	3/1/2017 2:03 PM	**Batch State**	Processed

Analysis Info

Acq Time	2017-02-28 14:40	**Data File**	cal 7.d
Sample Type	Calibration	**Sample Name**	cal 7
Dilution	1	**Acq Method**	Quant THC 2017.m
Position	P2-G1	**Sample Info**	
Inj Vol	-1	**Comment**	AM 27 cannabinoid confirmation

Sample Chromatogram



Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-d3	2.436	781217	277329	2.8169	244.4194
THC-COOH	THC-COOH-d9	2.566	364800	68562	5.3207	248.5541
THC	THC-d3	6.833	309043	99762	3.0978	257.5686