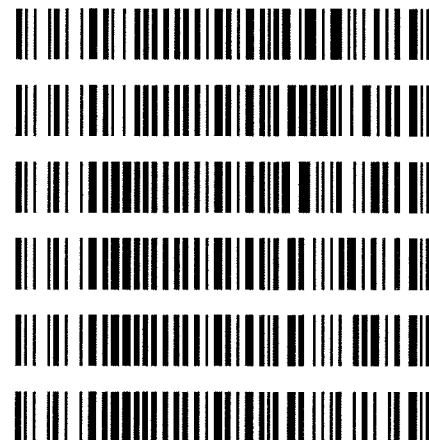


**Worklist: 2733**

<u>LAB CASE</u>	<u>ITEM</u>	<u>TASK ID</u>	<u>DESCRIPTION</u>
C2018-1903	1	129059	AM 27 Blood THC Quant by LC-QQQ
C2018-1997	1	129058	AM 27 Blood THC Quant by LC-QQQ
P2018-2727	1	129057	AM 27 Blood THC Quant by LC-QQQ
P2018-2844	1	129056	AM 27 Blood THC Quant by LC-QQQ
P2018-2845	1	129055	AM 27 Blood THC Quant by LC-QQQ
P2018-2847	1	129054	AM 27 Blood THC Quant by LC-QQQ



A handwritten signature or mark, possibly a stylized 'A' or 'S', located in the bottom right corner of the page.

# AM# 27: Quantitation of THC and Metabolites in Blood by LC-MS/MS

Extraction Date: 10/10/18  
Plate lot#: 0539904

Analyst: Anne Nord  
Plate Expiration: 09/10/2019

**Mobile phase A:** 0.1% Formic Acid in LCMS Water  
MTBE  
**Mobile phase B:** 0.1% Formic acid in Acetonitrile  
LCMS Methanol  
Hexane  
**Blank Blood Lot:** 18G207D7  
**Column:** UCT Selectra DA 100 x 2.1mm 3um  
**LCMS-QQQ ID:** 62340

## 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: k52558g** in wells of analytical (standards) plate.
- 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. *Shaker ID: 66759*
- 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: 66792*
- 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: 66819*
- 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.  
Batch path: 1010118 cann quant      Batch Name: cann quant
- 2. Make any necessary integration changes, Curve weighting of Linear 1/x with  $r^2$  values  $\geq 0.98$  for each analyte
- 3. RT +/- 3% or 0.100 min, whichever is greater, +/- 20% Accuracy for greater than (+/- 30% for 10ng/ml or less).  
Ion ratios must be within +/- 20% of the averaged calibrators
- 4. Case sample response for THC and OH-THC 3ng/mL (quantitative), Carboxy-THC: 10ng/mL (qualitative only) will be reported. Samples with a THC or OH-THC response over 50 ng/mL will be reported out as greater than 50 ng/mL.
- 5. Did all QCs pass for each analyte? Y / N
- 6. Enter QCs into control charting.
- 7. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS:



Toxicology AMI method 27 external prep information

working solution 1 ug/ml in meoh C-THC, THC-OH, THC

Stock solution 1mg/ml 10 ul each THC, THC-OH 100 ug/ml 100 ul C-THC in 9890 ul meOH

Ppd 6/5/18 Exp: 4/1/19 lot 6518 by AMN

Drug	lot (cerilliant)	expiration
C-THC	FE03121501	3/1/2020
THC-OH	FE01141502	1/1/2020
THC	FE04231406	4/1/2019

AM 27 control 50 ul working solution lot (6518) in 4950 ul blood lot (17J20718)

ppd 6/5/18 Exp 4/1/19 lot 6518 Concentration 10 ng/ml each by AMN

ppd 9/20/18 Exp 4/1/19 lot 92018 Concentration 10 ng/ml each by AMN



# ISP FORENSICS - Cd'A Instrument # 62340

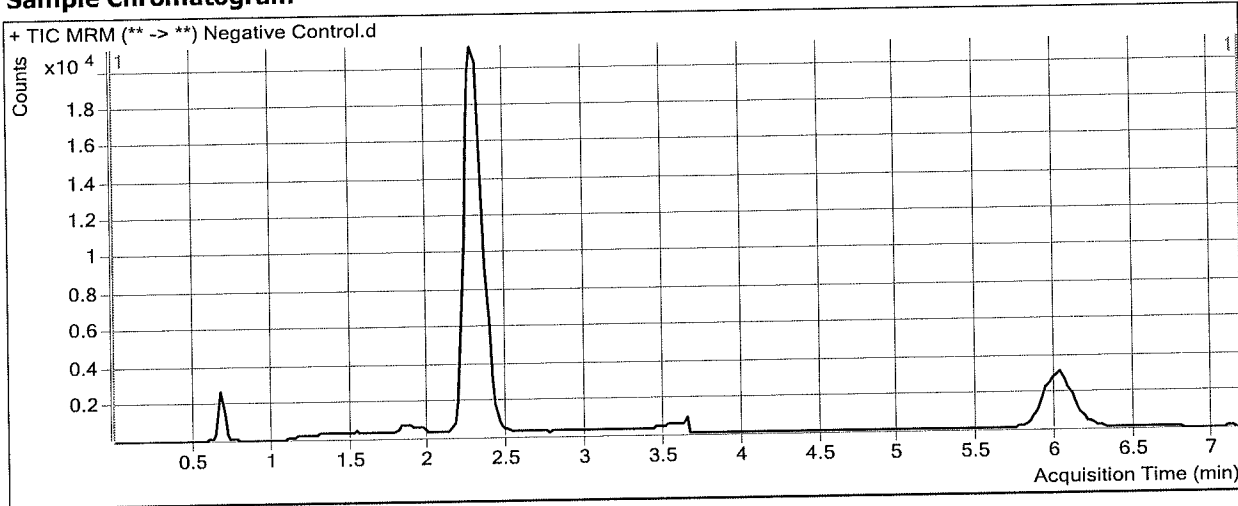
## Cannabinoids Analysis Report

Batch Data Path D:\2018 Data\1010118 cann quant\QuantResults\cann quant.batch.bin  
Analysis Time 10/12/2018 11:12 AM Analyst Name ISP Tox  
Report Time 10/12/2018 11:15 AM Reporter Name ISP Tox  
Last Calib Update 10/12/2018 11:12 AM Batch State Processed

### Analysis Info

Acq Time 2018-10-11 18:45 Data File Negative Control.d  
Sample Type Sample Sample Name Negative Control  
Dilution 1 Acq Method AM 27 Quant THC 7-2017.m  
Position P1-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	1.855	1614	120922	0.0134	1.6715

Handwritten notes: *LOA* and *3*

# ISP FORENSICS - Cd'A Instrument # 62340

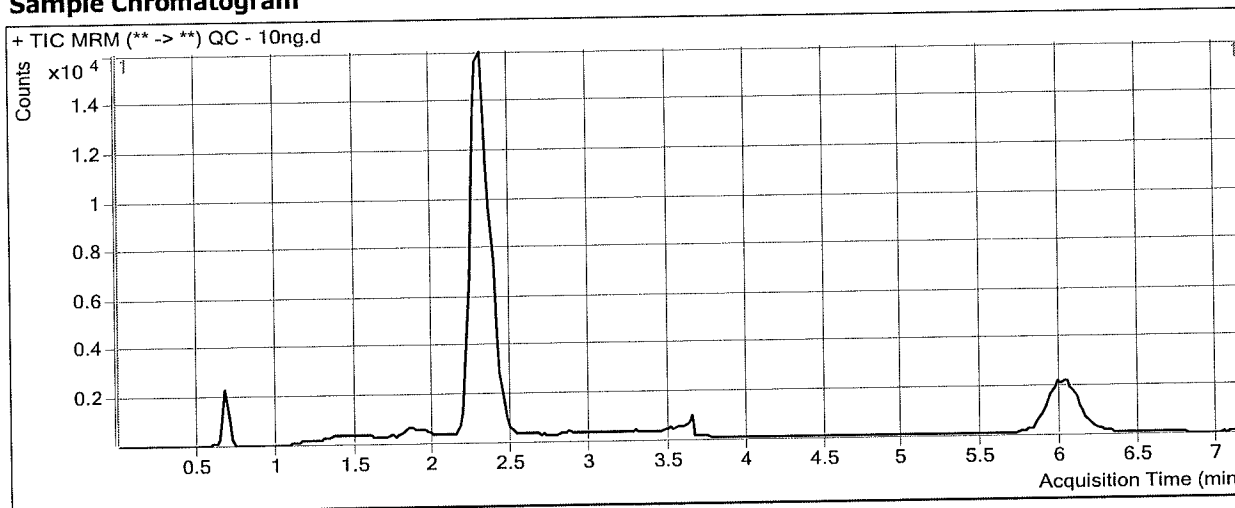
## Cannabinoids Analysis Report

**Batch Data Path** D:\2018 Data\1010118 cann quant\QuantResults\cann quant.batch.bin  
**Analysis Time** 10/12/2018 11:12 AM **Analyst Name** ISP Tox  
**Report Time** 10/12/2018 11:15 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/12/2018 11:12 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-11 18:57 **Data File** QC - 10ng.d *10ng CTHC, 5THC, 5THCOH A*  
**Sample Type** QC **Sample Name** QC - 10ng  
**Dilution** 1 **Acq Method** AM 27 Quant THC 7-2017.m  
**Position** P1-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	2.296	3583	88066	0.0407	4.9471 -
THC-COOH	THC-COOH-d9	2.386	6156	38700	0.1591	9.7300 -
THC	THC-d3	6.073	1426	29047	0.0491	5.0459 -

# ISP FORENSICS - Cd'A Instrument # 62340

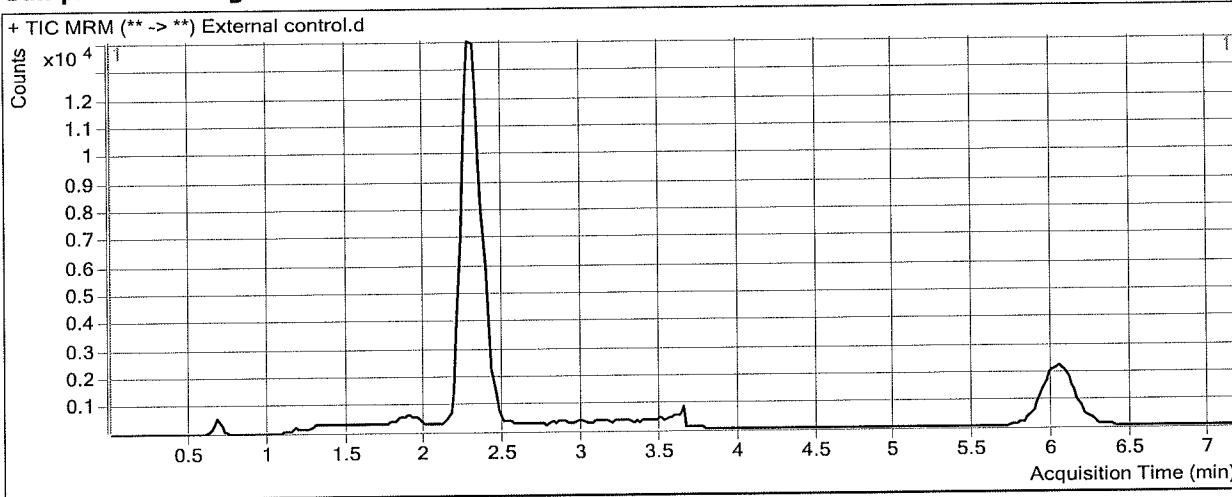
## Cannabinoids Analysis Report

**Batch Data Path** D:\2018 Data\1010118 cann quant\QuantResults\cann quant.batch.bin  
**Analysis Time** 10/12/2018 11:12 AM **Analyst Name** ISP Tox  
**Report Time** 10/12/2018 11:15 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/12/2018 11:12 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-11 19:09 **Data File** External control.d  
**Sample Type** Sample **Sample Name** External control  
**Dilution** 1 **Acq Method** AM 27 Quant THC 7-2017.m  
**Position** P1-B2 **Sample Info**  
**Inj Vol** -1 **Comment** AM 27 Cannabinoid Confirmation

### Sample Chromatogram



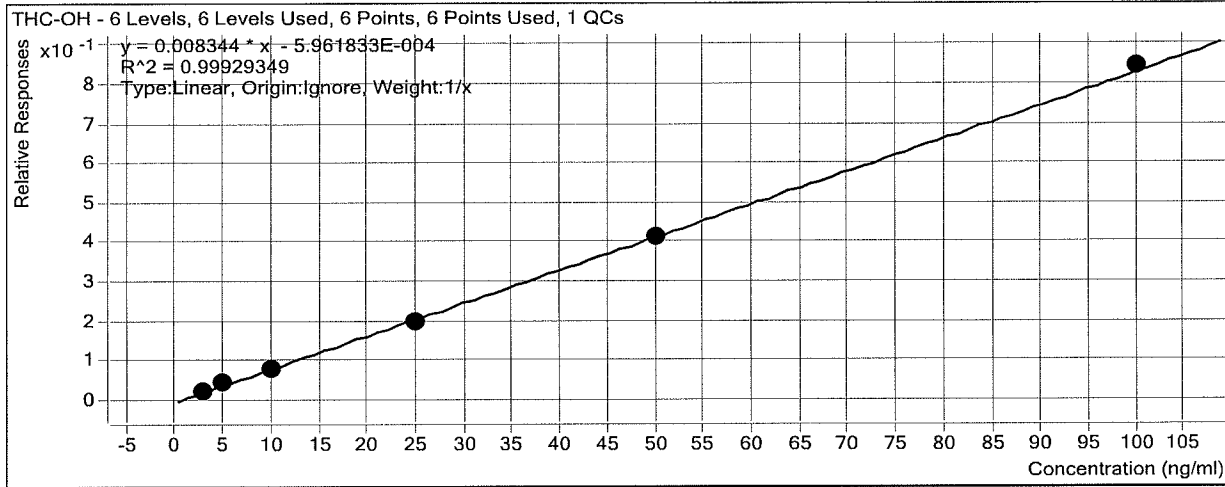
### Results

Compound	ISTD Compound	RT	Response	ISTD Resp	Resp Ratio	Final Conc
THC-OH	THC-OH-d3	2.296	5849	77649	0.0753	9.0992
THC-COOH	THC-COOH-d9	2.386	4576	34306	0.1334	8.0435
THC	THC-d3	6.073	3072	27737	0.1108	11.5509

# ISP Forensics Calibration Curve Report

**Batch Data Path** D:\2018 Data\1010118 cann quant\QuantResults\cann quant.batch.bin  
**Last Calib Update** 10/12/2018 11:12 AM **Analyst Name** ISP TOX

**Target Compound** *THC-OH*  
**Internal Standard** *THC-OH-d3*

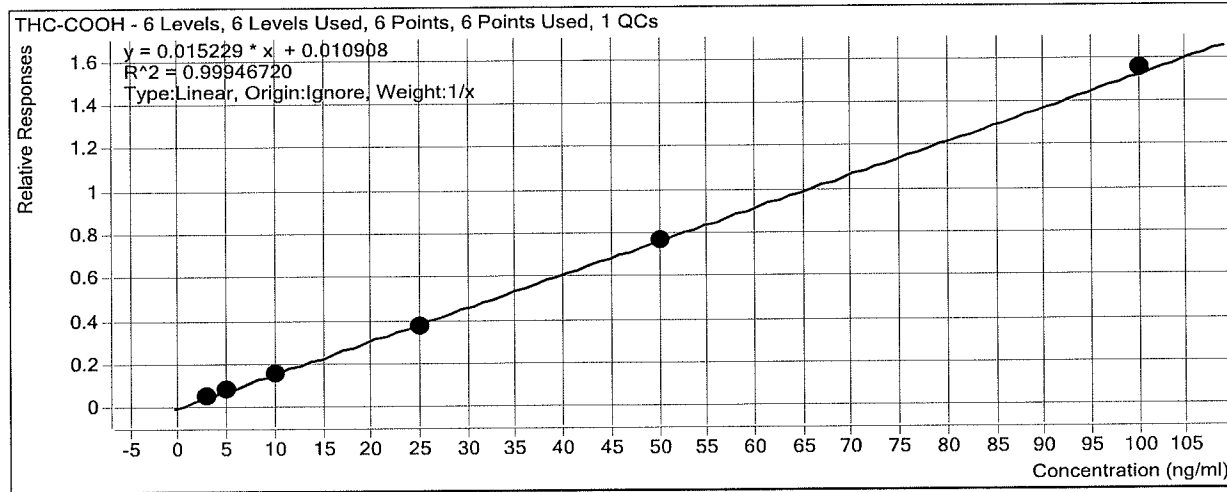


Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
Cal 1 - 3ng	1	<input checked="" type="checkbox"/>	3	2.9	98.0
Cal 2 - 5ng	2	<input checked="" type="checkbox"/>	5	5.4	108.1
Cal 3 - 10ng	3	<input checked="" type="checkbox"/>	10	9.7	97.3
Cal 4 - 25ng	4	<input checked="" type="checkbox"/>	25	23.9	95.7
Cal 5 - 50ng	5	<input checked="" type="checkbox"/>	50	49.9	99.8
Cal 6 - 100ng	6	<input checked="" type="checkbox"/>	100	101.1	101.1
QC - 10ng	7	<input checked="" type="checkbox"/>	5	4.9	98.9

# ISP Forensics Calibration Curve Report

**Batch Data Path** D:\2018 Data\1010118 cann quant\QuantResults\cann quant.batch.bin  
**Last Calib Update** 10/12/2018 11:12 AM **Analyst Name** ISP TOX

**Target Compound** *THC-COOH*  
**Internal Standard** *THC-COOH-d9*



Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
Cal 1 - 3ng	1	<input checked="" type="checkbox"/>	3	3.2	105.8
Cal 2 - 5ng	2	<input checked="" type="checkbox"/>	5	4.9	97.8
Cal 3 - 10ng	3	<input checked="" type="checkbox"/>	10	10.0	99.9
Cal 4 - 25ng	4	<input checked="" type="checkbox"/>	25	23.9	95.7
Cal 5 - 50ng	5	<input checked="" type="checkbox"/>	50	49.8	99.6
Cal 6 - 100ng	6	<input checked="" type="checkbox"/>	100	101.2	101.2
QC - 10ng	7	<input checked="" type="checkbox"/>	10	9.7	97.3

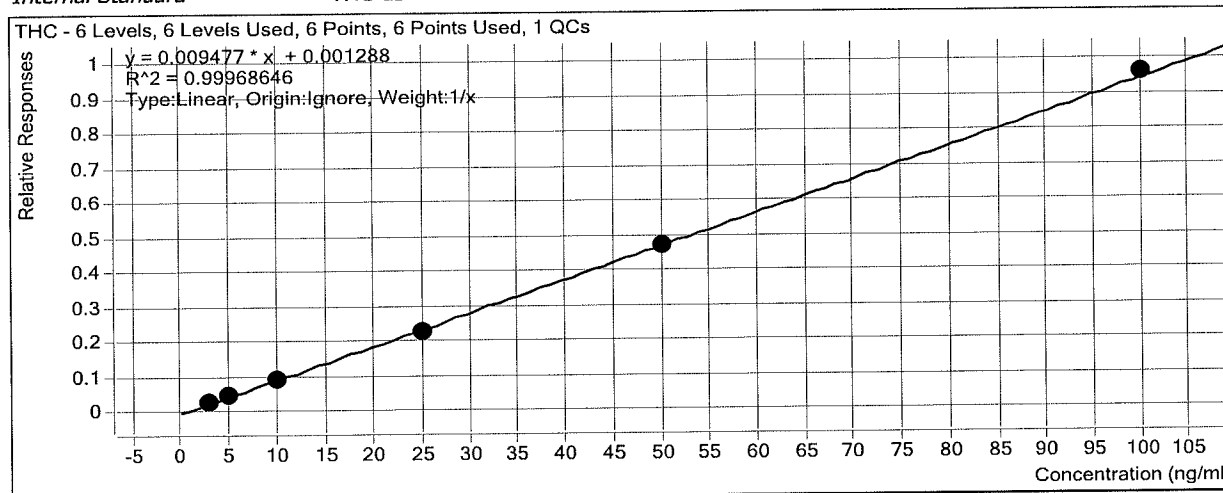


# ISP Forensics Calibration Curve Report

**Batch Data Path** D:\2018 Data\1010118 cann quant\QuantResults\cann quant.batch.bin

**Last Calib Update** 10/12/2018 11:12 AM **Analyst Name** ISP TOX

**Target Compound** *THC*  
**Internal Standard** *THC-d3*



Sample	Level	Enabled	Exp Conc	Final Conc	Accuracy
Cal 1 - 3ng	1	<input checked="" type="checkbox"/>	3	3.1	103.6
Cal 2 - 5ng	2	<input checked="" type="checkbox"/>	5	5.0	99.6
Cal 3 - 10ng	3	<input checked="" type="checkbox"/>	10	10.0	99.5
Cal 4 - 25ng	4	<input checked="" type="checkbox"/>	25	24.2	96.7
Cal 5 - 50ng	5	<input checked="" type="checkbox"/>	50	49.7	99.5
Cal 6 - 100ng	6	<input checked="" type="checkbox"/>	100	101.1	101.1
QC - 10ng	7	<input checked="" type="checkbox"/>	5	5.0	100.9

# ISP FORENSICS - Cd'A Instrument # 62340

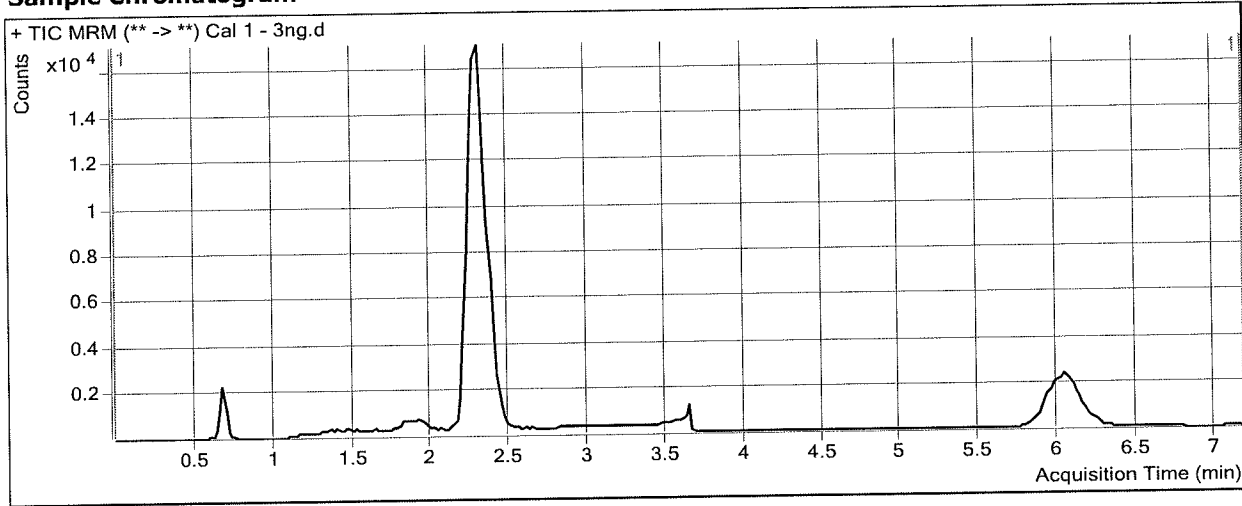
## Cannabinoids Analysis Report

**Batch Data Path** D:\2018 Data\1010118 cann quant\QuantResults\cann quant.batch.bin  
**Analysis Time** 10/12/2018 11:12 AM **Analyst Name** ISP Tox  
**Report Time** 10/12/2018 11:15 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/12/2018 11:12 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-11 17:22 **Data File** Cal 1 - 3ng.d  
**Sample Type** Calibration **Sample Name** Cal 1 - 3ng  
**Dilution** 1 **Acq Method** AM 27 Quant THC 7-2017.m  
**Position** P1-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	2.316	2354	98295	0.0239	2.9414
THC-COOH	THC-COOH-d9	2.386	2494	42108	0.0592	3.1732
THC	THC-d3	6.073	1023	33277	0.0308	3.1090

# ISP FORENSICS - Cd'A Instrument # 62340

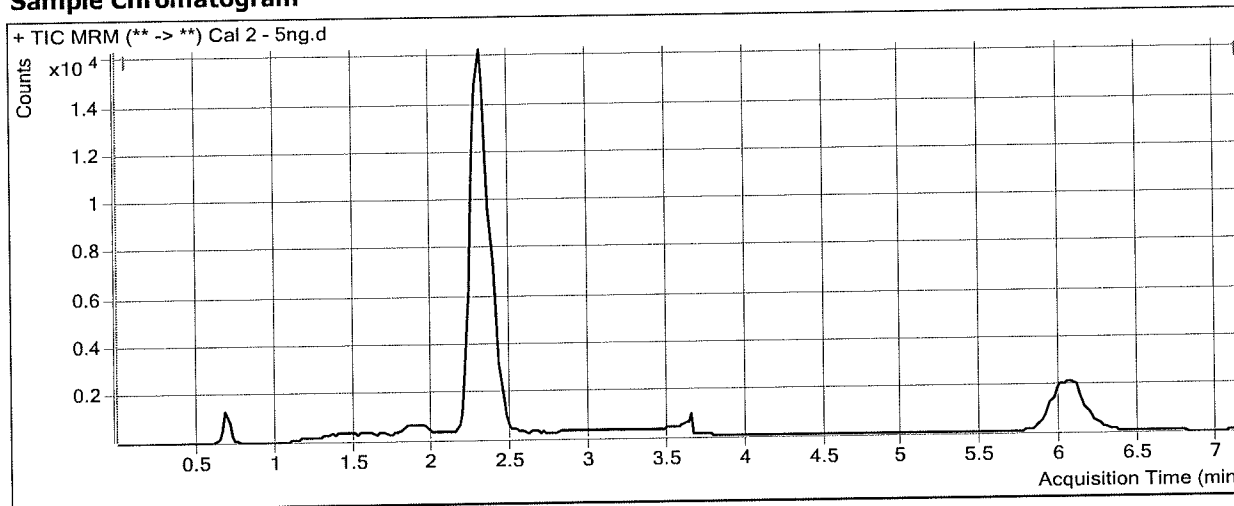
## Cannabinoids Analysis Report

**Batch Data Path** D:\2018 Data\1010118 cann quant\QuantResults\cann quant.batch.bin  
**Analysis Time** 10/12/2018 11:12 AM **Analyst Name** ISP Tox  
**Report Time** 10/12/2018 11:15 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/12/2018 11:12 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-11 17:34 **Data File** Cal 2 - 5ng.d  
**Sample Type** Calibration **Sample Name** Cal 2 - 5ng  
**Dilution** 1 **Acq Method** AM 27 Quant THC 7-2017.m  
**Position** P1-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	2.296	4061	91285	0.0445	5.4026
THC-COOH	THC-COOH-d9	2.406	3343	39141	0.0854	4.8920
THC	THC-d3	6.113	1441	29706	0.0485	4.9825

# ISP FORENSICS - Cd'A Instrument # 62340

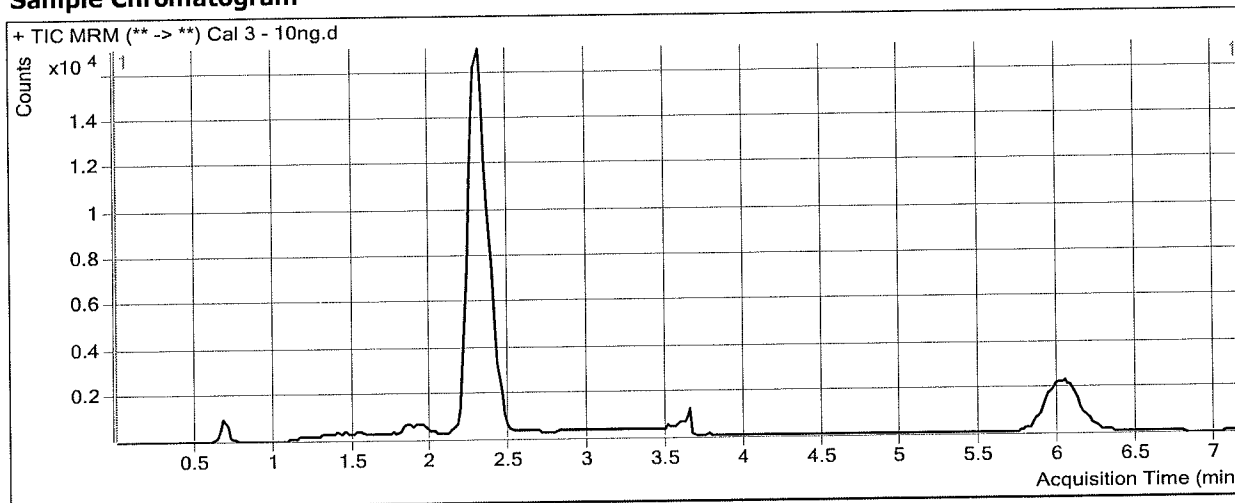
## Cannabinoids Analysis Report

**Batch Data Path** D:\2018 Data\1010118 cann quant\QuantResults\cann quant.batch.bin  
**Analysis Time** 10/12/2018 11:12 AM **Analyst Name** ISP Tox  
**Report Time** 10/12/2018 11:15 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/12/2018 11:12 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-11 17:46 **Data File** Cal 3 - 10ng.d  
**Sample Type** Calibration **Sample Name** Cal 3 - 10ng  
**Dilution** 1 **Acq Method** AM 27 Quant THC 7-2017.m  
**Position** P1-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	2.316	7469	92632	0.0806	9.7341
THC-COOH	THC-COOH-d9	2.406	6447	39538	0.1631	9.9906
THC	THC-d3	6.073	2883	30154	0.0956	9.9523

# ISP FORENSICS - Cd'A Instrument # 62340

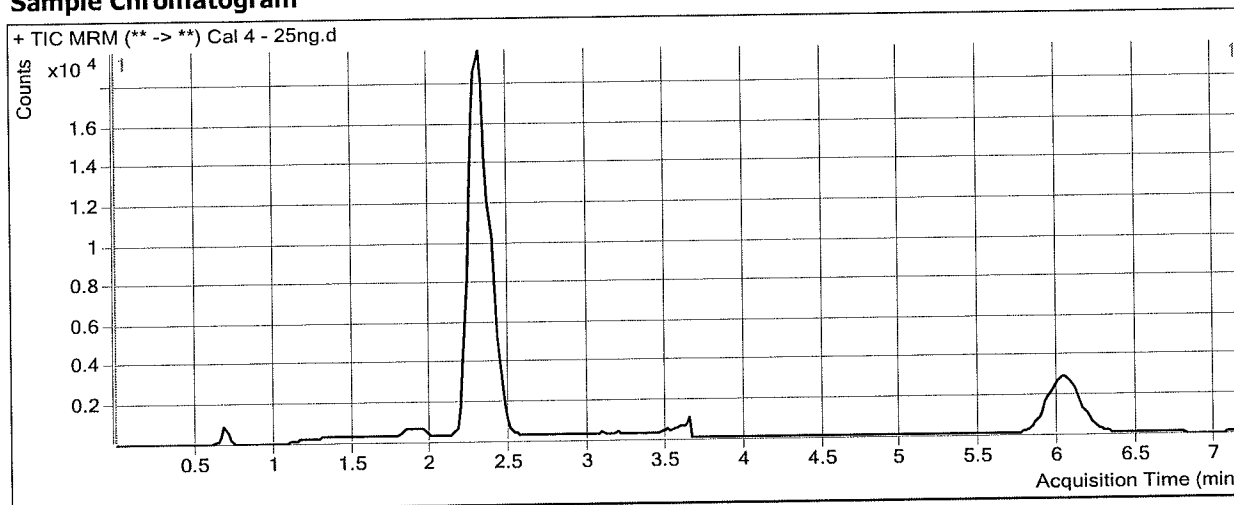
## Cannabinoids Analysis Report

**Batch Data Path** D:\2018 Data\1010118 cann quant\QuantResults\cann quant.batch.bin  
**Analysis Time** 10/12/2018 11:12 AM **Analyst Name** ISP Tox  
**Report Time** 10/12/2018 11:15 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/12/2018 11:12 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-11 17:58 **Data File** Cal 4 - 25ng.d  
**Sample Type** Calibration **Sample Name** Cal 4 - 25ng  
**Dilution** 1 **Acq Method** AM 27 Quant THC 7-2017.m  
**Position** P1-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	2.316	19103	96005	0.1990	23.9174
THC-COOH	THC-COOH-d9	2.406	15395	41039	0.3751	23.9167
THC	THC-d3	6.093	7456	32373	0.2303	24.1664

# ISP FORENSICS - Cd'A Instrument # 62340

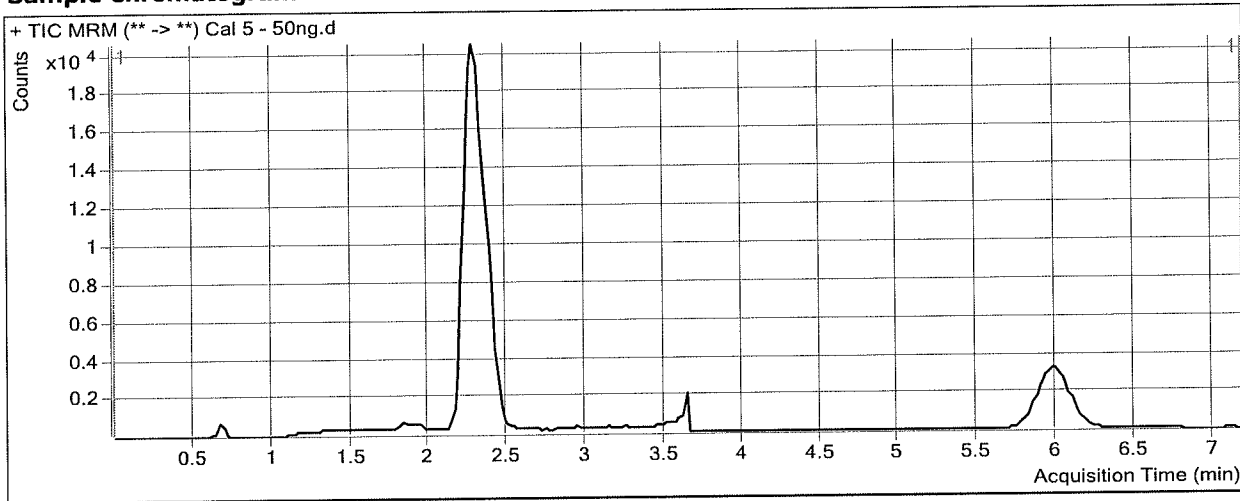
## Cannabinoids Analysis Report

**Batch Data Path** D:\2018 Data\1010118 cann quant\QuantResults\cann quant.batch.bin  
**Analysis Time** 10/12/2018 11:12 AM **Analyst Name** ISP Tox  
**Report Time** 10/12/2018 11:15 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/12/2018 11:12 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-11 18:10 **Data File** Cal 5 - 50ng.d  
**Sample Type** Calibration **Sample Name** Cal 5 - 50ng  
**Dilution** 1 **Acq Method** AM 27 Quant THC 7-2017.m  
**Position** P1-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	2.296	34644	83345	0.4157	49.8866
THC-COOH	THC-COOH-d9	2.386	27739	36068	0.7691	49.7864
THC	THC-d3	5.993	13367	28282	0.4726	49.7380

# ISP FORENSICS - Cd'A Instrument # 62340

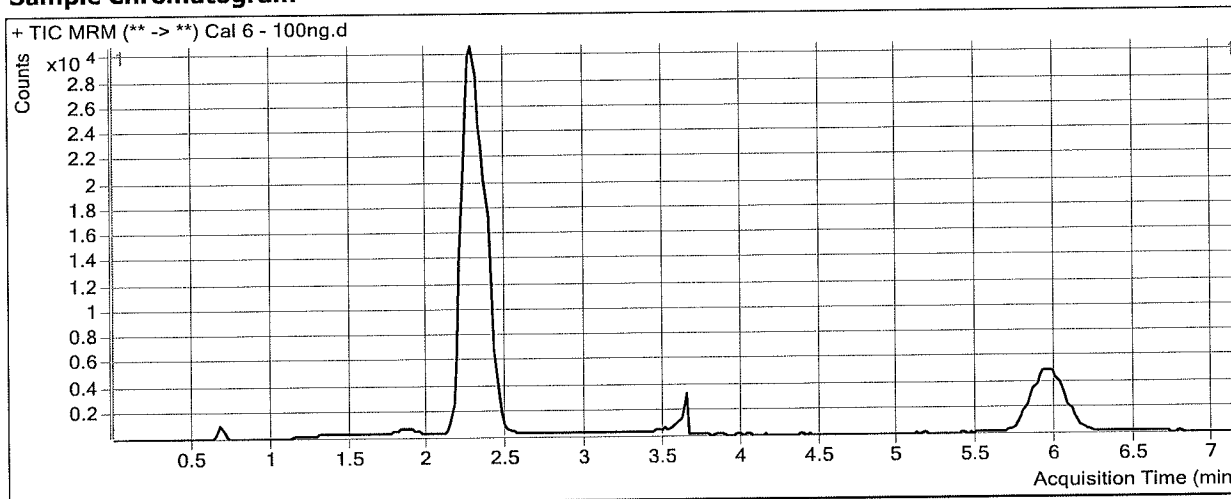
## Cannabinoids Analysis Report

**Batch Data Path** D:\2018 Data\1010118 cann quant\QuantResults\cann quant.batch.bin  
**Analysis Time** 10/12/2018 11:12 AM **Analyst Name** ISP Tox  
**Report Time** 10/12/2018 11:15 AM **Reporter Name** ISP Tox  
**Last Calib Update** 10/12/2018 11:12 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-10-11 18:22 **Data File** Cal 6 - 100ng.d  
**Sample Type** Calibration **Sample Name** Cal 6 - 100ng  
**Dilution** 1 **Acq Method** AM 27 Quant THC 7-2017.m  
**Position** P1-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	2.276	81308	96431	0.8432	101.1179
THC-COOH	THC-COOH-d9	2.366	62214	40069	1.5527	101.2411
THC	THC-d3	5.953	30610	31921	0.9589	101.0518