9/12/2024

**Worklist: 6926**

**REVIEWED**
*By Britany Wylie at 2:16 pm, Sep 13, 2024*

| LAB_CASE | ITEM | ITEM_TYPE | DESCRIPTION |
|---|---|---|---|
| C2024-1658 | 1 | BCK | AM 27 Blood THC Quant by LC-QQQ |
| C2024-1666 | 1 | BCK | AM 27 Blood THC Quant by LC-QQQ |
| C2024-1808 | 1 | BCK | AM 27 Blood THC Quant by LC-QQQ |
| C2024-1809 | 1 | BCK | AM 27 Blood THC Quant by LC-QQQ |
| M2024-3128 | 1 | BCK | AM 27 Blood THC Quant by LC-QQQ |

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

Extraction Date: 9/11/24
Plate lot#: 240513
Mobile phase A: 0.1% Formic Acid in LCMS Water
Blank Blood Lot: 24C52043
Column: UCT Selectra DA 100 x 2.1mm 3um

Analyst: Anne Nord
Plate Retest Date: 11/13/2024
Mobile phase B: 0.1% Formic acid in Acetonitrile
Blank Urine Lot: blood run only
LCMS-QQQ ID: 69679

## 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. Using a calibrated pipette, pipette 1000µL blood or 1000µL urine in wells of analytical (standards) plate. **Pipette ID: K52558G**
☐ 3. Urine hydrolysis add **100 ul BG turbo, and 200 ul BG turbo buffer** to the urine samples in wells of the analytical plate.
☒ 4. Add **500µL of 0.1% formic acid in water** in the wells of the analytical plate.
☒ 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
☒ 6. Transfer **700-800µL of blood+acid or urine+acid** mixture to corresponding wells of SLE+ plate. Amount transferred: **750 µL**
☒ 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)***
☒ 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 75401 and evaporate to dryness at approx. 35°C.
☒ 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.
☒ 2. Make any necessary integration changes, Curve weighting of Linear 1/x with $r^2$ values ≥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. Did all QCs pass for each analyte? (if not, describe in comments section)
☒ 5. Enter QCs into control charting.
☒ 6. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: *C2024-1666-1 did not inject, it was reconstituted along with the control and re-injected on 9/12/24.*

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| a | cal 1 | blood end of run control | | | | |
| b | cal 2 | negative blood | | | | |
| c | cal 3 | M2024-3128-1 | | | | |
| d | cal 4 | 1658-1 | | | | |
| e | cal 5 | 1666-1 | | | | |
| f | cal 6 | 1808-1 | | | | |
| g | cal 7 | 1809-1 | | | | |
| h | Internal control (blood) | | | | | |

Plate position 3

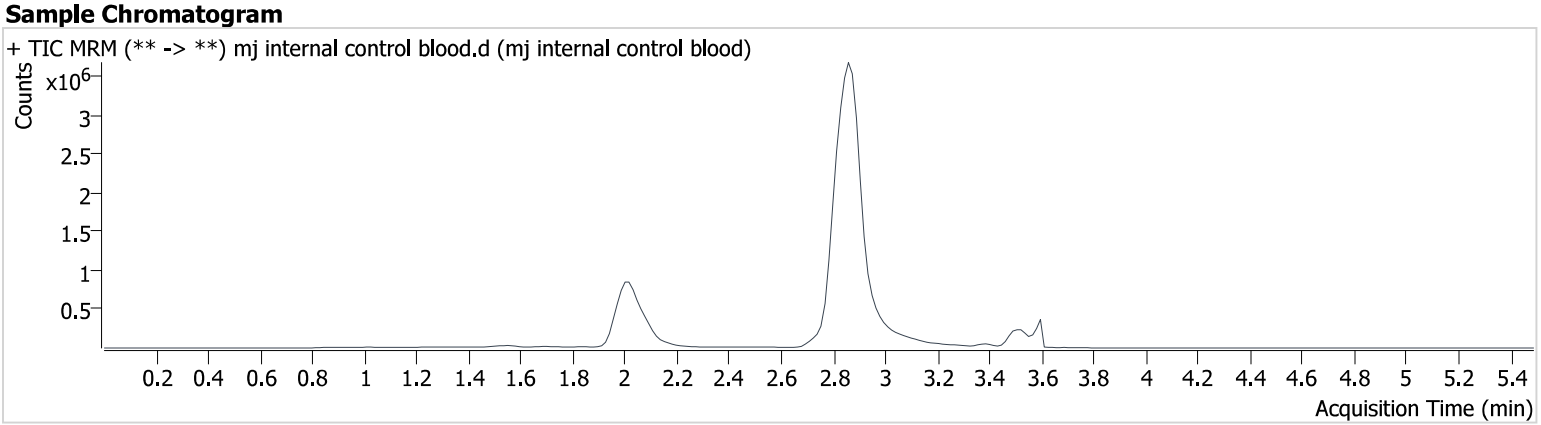
c2024-____-_

# AM #27 Cannabinoids

**Batch results** D:\MassHunter\Data\2024\am 27-28\091124\QuantResults\am 27.batch.bin
**Calibration Last Update** 9/12/2024 9:52:40 AM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | mj internal control blood.d |
| **Type** | QC | **Sample** | mj internal control blood |
| **Acq. Method** | thc quant 50 50.m | **Operator** | Anne Nord |
| **Sample Position** | P3-H1 | **Comment** | Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods |
| **Injection Volume** | 10 | | |
| **Acq. Date-Time** | 9/11/2024 7:25:56 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



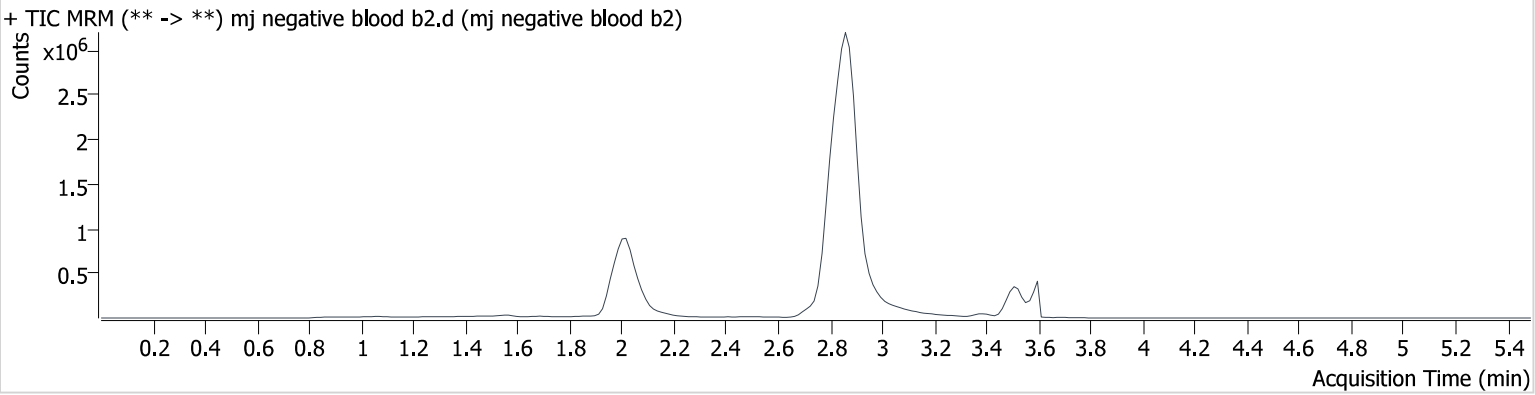

| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|---|---|---|---|---|---|---|---|
| THC-OH | 2.021 | 50059 | 234.2 | 831.85 | ∞ | 3395234 | 4.613 ng/ml |
| THC-COOH | 2.077 | 78123 | 431.9 | 278.99 | 182576.5 | 1419018 | 13.694 ng/ml |
| THC | 3.528 | 89997 | 1625.2 | 28.53 | ∞ | 762811 | 4.488 ng/ml |

# AM #27 Cannabinoids

**Batch results** D:\MassHunter\Data\2024\am 27-28\091124\QuantResults\am 27.batch.bin
**Calibration Last Update** 9/12/2024 9:52:40 AM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | mj negative blood b2.d |
| **Type** | Sample | **Sample** | mj negative blood b2 |
| **Acq. Method** | thc quant 50 50.m | **Operator** | Anne Nord |
| **Sample Position** | P3-B2 | **Comment** | Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods |
| **Injection Volume** | 10 | | |
| **Acq. Date-Time** | 9/11/2024 7:32:30 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**

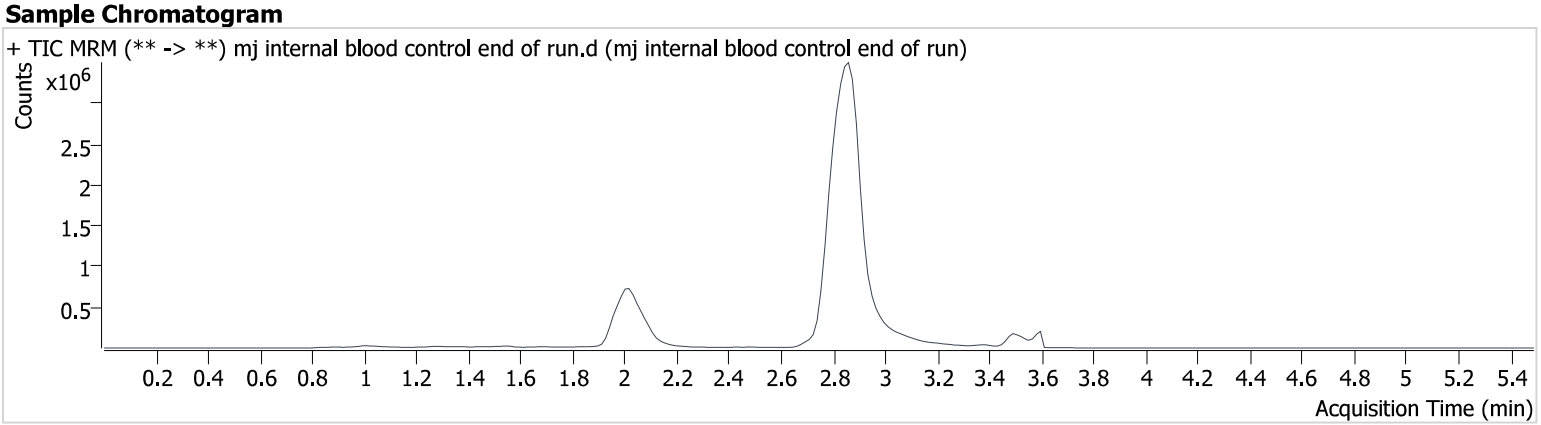


# AM #27 Cannabinoids

**Batch results** D:\MassHunter\Data\2024\am 27-28\091124\QuantResults\am 27.batch.bin
**Calibration Last Update** 9/12/2024 9:52:40 AM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | mj internal blood control end of run.d |
| **Type** | QC | **Sample** | mj internal blood control end of run |
| **Acq. Method** | thc quant 50 50.m | **Operator** | Anne Nord |
| **Sample Position** | P3-A2 | **Comment** | Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods |
| **Injection Volume** | 10 | | |
| **Acq. Date-Time** | 9/11/2024 8:45:02 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



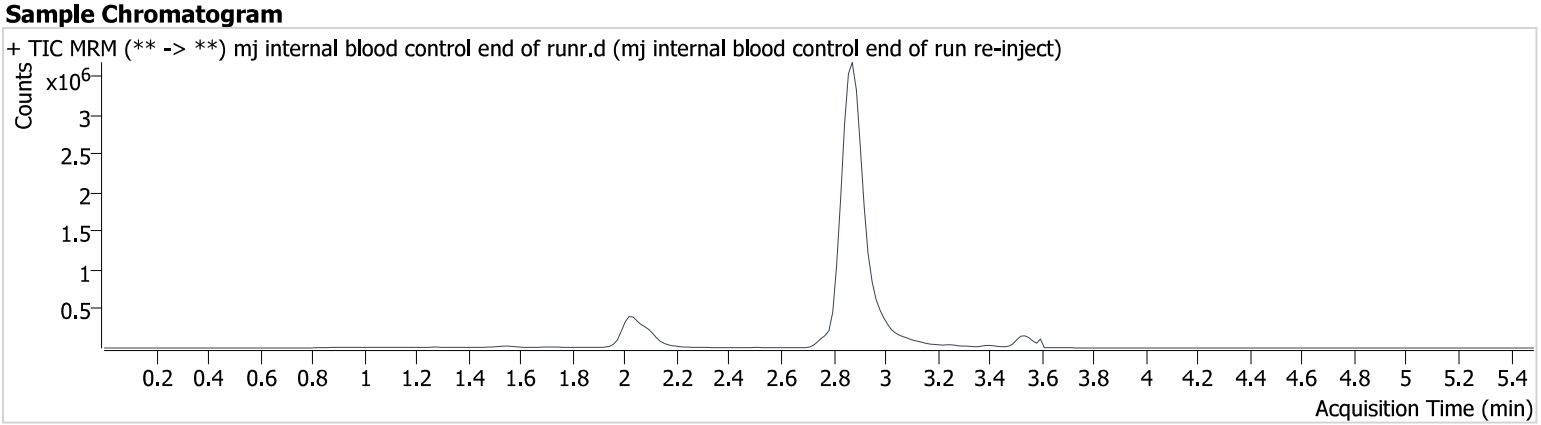

| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|---|---|---|---|---|---|---|---|
| THC-OH | 2.006 | 43488 | ∞ | 883.88 | ∞ | 3040753 | 4.486 ng/ml |
| THC-COOH | 2.077 | 78598 | 1684.0 | 287.95 | 1663.7 | 1259495 | 15.362 ng/ml |
| THC | 3.528 | 60704 | 145.5 | 27.38 | 314.4 | 547771 | 4.240 ng/ml |

# AM #27 Cannabinoids

**Batch results** D:\MassHunter\Data\2024\am 27-28\091124\QuantResults\am 27.batch.bin
**Calibration Last Update** 9/12/2024 9:52:40 AM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | mj internal blood control end of runr.d |
| **Type** | QC | **Sample** | mj internal blood control end of run re-inject |
| **Acq. Method** | thc quant 50 50.m | **Operator** | Anne Nord |
| **Sample Position** | P3-A2 | **Comment** | Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods |
| **Injection Volume** | 10 | | |
| **Acq. Date-Time** | 9/12/2024 9:21:38 AM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**

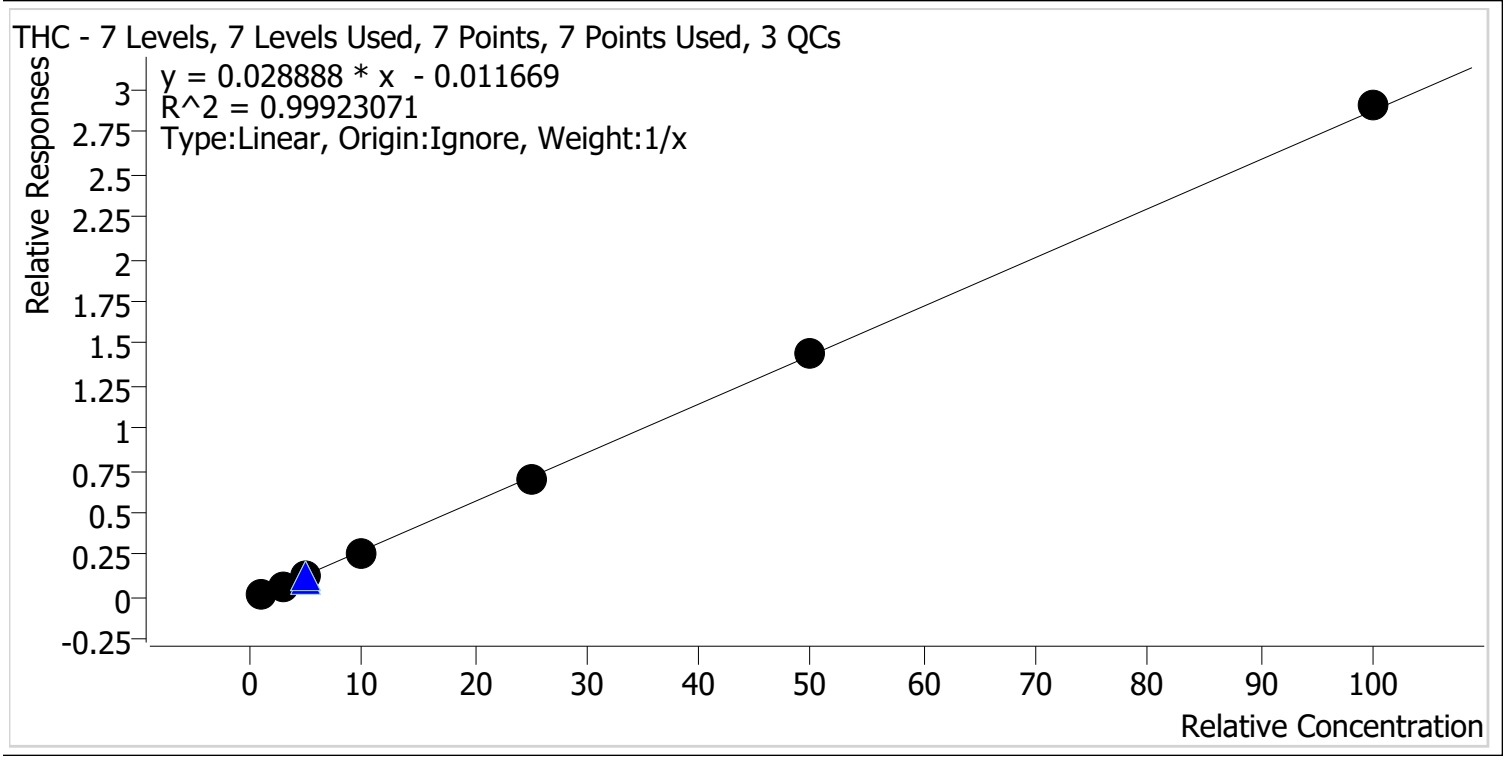



| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|---|---|---|---|---|---|---|---|
| THC-OH | 2.036 | 22685 | ∞ | 791.24 | ∞ | 1456489 | 4.851 ng/ml |
| THC-COOH | 2.107 | 43933 | 506.2 | 270.05 | 12508.3 | 773247 | 14.093 ng/ml |
| THC | 3.543 | 45595 | ∞ | 29.55 | ∞ | 369691 | 4.673 ng/ml |

this sample was reconstituted and injected on 9-12-24

# Compound Calibration Report

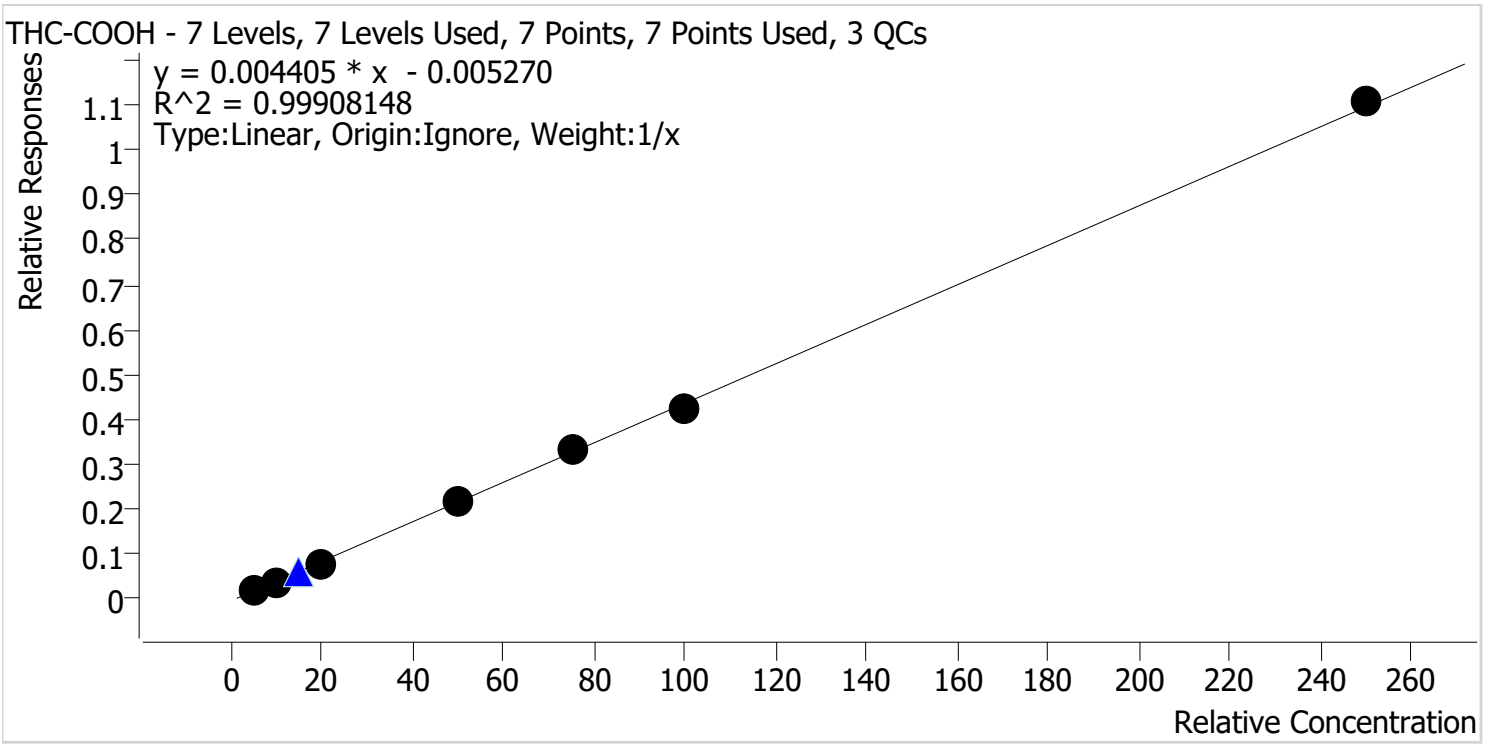
| | |
|---|---|
| **Batch results** | D:\MassHunter\Data\2024\am 27-28\091124\QuantResults\am 27.batch.bin |
| **Last Cal. Update** | 9/12/2024 9:52 AM |
| **Analyst Name** | ISP\datastor |
| **Analyte** | THC |
| **Internal Standard** | THC-d3 |




| Sample | Level | Enabled | Expected Concentration | Final Concentration | Accuracy |
|---|---|---|---|---|---|
| mj cal 1 | 1 | ✔ | 1.0 | 1.2 | 117.4 |
| mj cal 2 | 2 | ✔ | 3.0 | 2.8 | 94.7 |
| mj cal 3 | 3 | ✔ | 5.0 | 4.8 | 95.2 |
| mj cal 4 | 4 | ✔ | 10.0 | 9.3 | 93.1 |
| mj cal 5 | 5 | ✔ | 25.0 | 24.4 | 97.6 |
| mj cal 6 | 6 | ✔ | 50.0 | 50.5 | 101.0 |
| mj cal 7 | 7 | ✔ | 100.0 | 101.0 | 101.0 |

# Compound Calibration Report

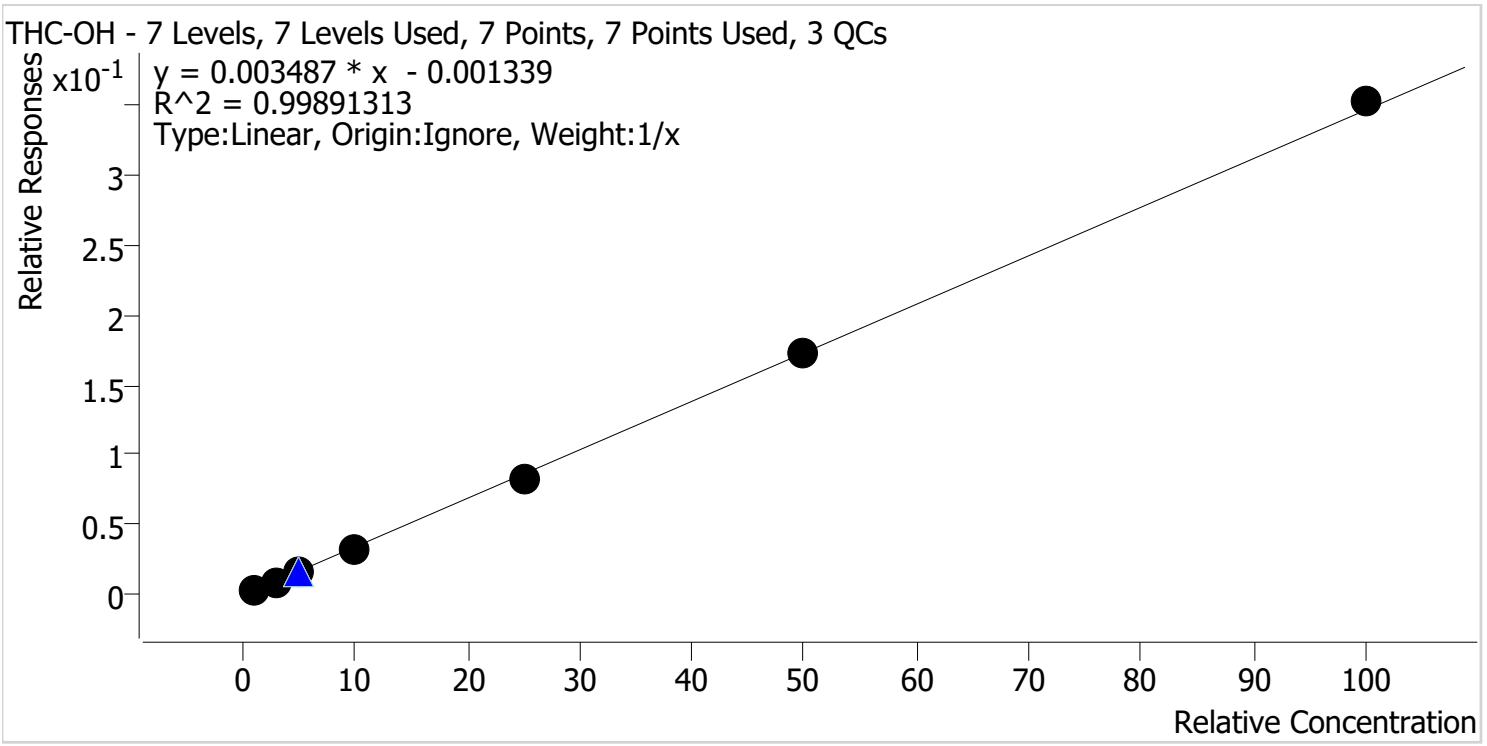
| | |
|---|---|
| **Batch results** | D:\MassHunter\Data\2024\am 27-28\091124\QuantResults\am 27.batch.bin |
| **Last Cal. Update** | 9/12/2024 9:52 AM |
| **Analyst Name** | ISP\datastor |
| **Analyte** | THC-COOH |
| **Internal Standard** | THC-COOH-d9 |




| Sample | Level | Enabled | Expected Concentration | Final Concentration | Accuracy |
|---|---|---|---|---|---|
| mj cal 1 | 1 | ✔ | 5.0 | 5.5 | 111.0 |
| mj cal 2 | 2 | ✔ | 10.0 | 9.3 | 93.0 |
| mj cal 3 | 3 | ✔ | 20.0 | 19.3 | 96.3 |
| mj cal 4 | 4 | ✔ | 50.0 | 49.8 | 99.6 |
| mj cal 5 | 5 | ✔ | 75.0 | 77.0 | 102.7 |
| mj cal 6 | 6 | ✔ | 100.0 | 96.4 | 96.4 |
| mj cal 7 | 7 | ✔ | 250.0 | 252.7 | 101.1 |

# Compound Calibration Report

| | |
|---|---|
| **Batch results** | D:\MassHunter\Data\2024\am 27-28\091124\QuantResults\am 27.batch.bin |
| **Last Cal. Update** | 9/12/2024 9:52 AM |
| **Analyst Name** | ISP\datastor |
| **Analyte** | THC-OH |
| **Internal Standard** | THC-OH-d3 |



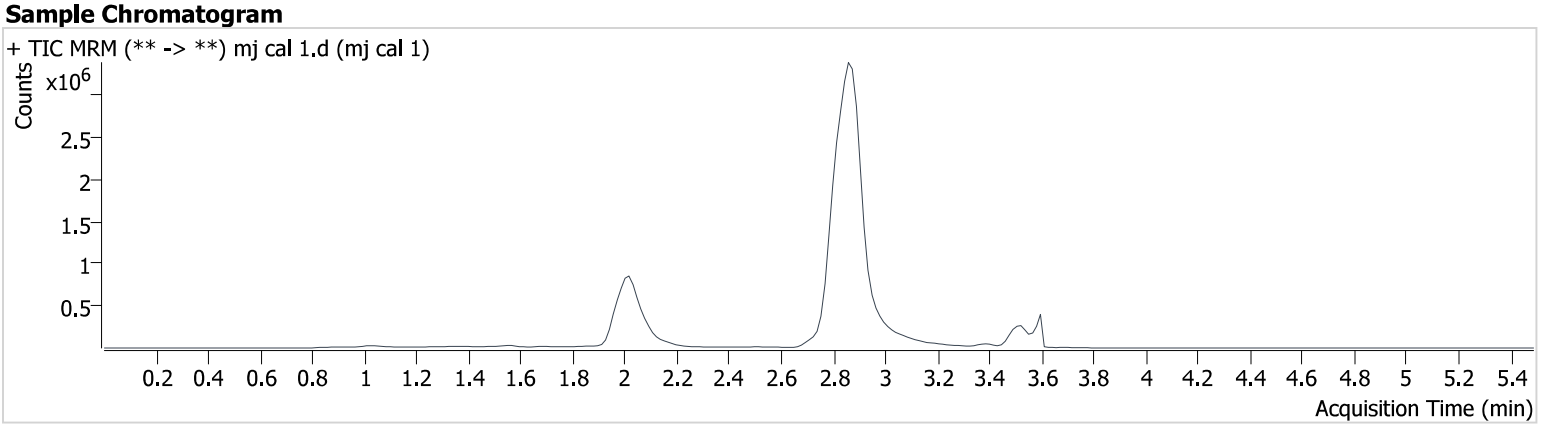

| Sample | Level | Enabled | Expected Concentration | Final Concentration | Accuracy |
|---|---|---|---|---|---|
| mj cal 1 | 1 | ✔ | 1.0 | 1.2 | 117.6 |
| mj cal 2 | 2 | ✔ | 3.0 | 3.0 | 98.4 |
| mj cal 3 | 3 | ✔ | 5.0 | 4.6 | 92.5 |
| mj cal 4 | 4 | ✔ | 10.0 | 9.4 | 93.6 |
| mj cal 5 | 5 | ✔ | 25.0 | 23.9 | 95.6 |
| mj cal 6 | 6 | ✔ | 50.0 | 50.3 | 100.5 |
| mj cal 7 | 7 | ✔ | 100.0 | 101.7 | 101.7 |

# AM #27 Cannabinoids

**Batch results** D:\MassHunter\Data\2024\am 27-28\091124\QuantResults\am 27.batch.bin
**Calibration Last Update** 9/12/2024 9:52:40 AM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | mj cal 1.d |
| **Type** | Cal | **Sample** | mj cal 1 |
| **Acq. Method** | thc quant 50 50.m | **Operator** | Anne Nord |
| **Sample Position** | P3-A1 | **Comment** | Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods |
| **Injection Volume** | 10 | | |
| **Acq. Date-Time** | 9/11/2024 6:39:40 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



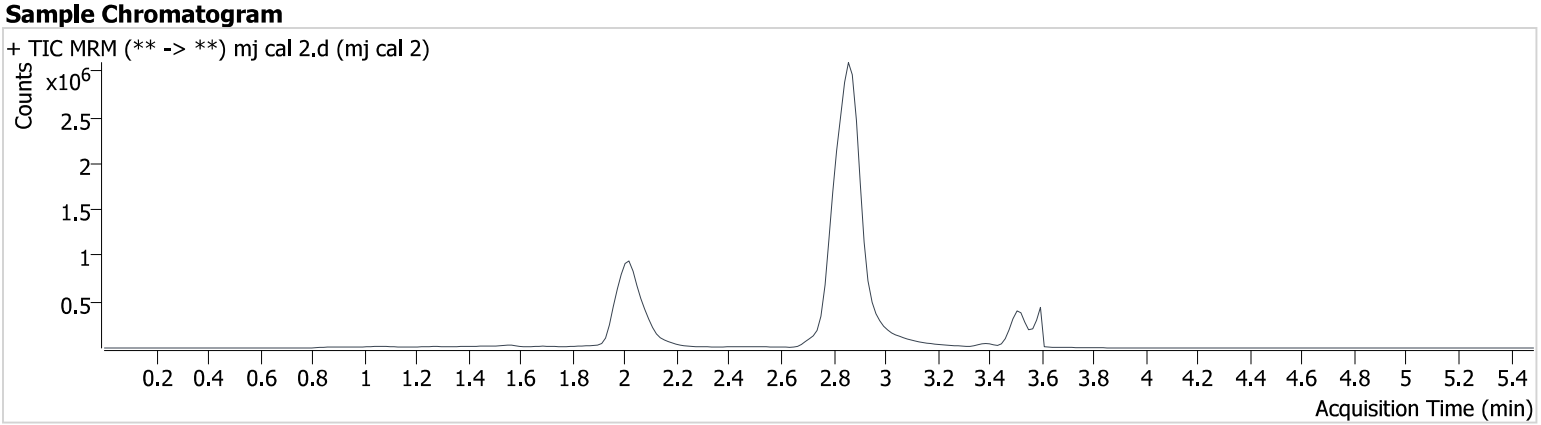

| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. | |
|---|---|---|---|---|---|---|---|---|
| THC-OH | 2.021 | 10945 | ∞ | 737.65 | ∞ | 3963394 | 1.176 ng/ml | Low |
| THC-COOH | 2.092 | 28369 | 826.0 | 283.82 | 38539.3 | 1479380 | 5.549 ng/ml | |
| THC | 3.528 | 20603 | ∞ | 24.20 | ∞ | 926654 | 1.174 ng/ml | |

# AM #27 Cannabinoids

**Batch results** D:\MassHunter\Data\2024\am 27-28\091124\QuantResults\am 27.batch.bin
**Calibration Last Update** 9/12/2024 9:52:40 AM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | mj cal 2.d |
| **Type** | Cal | **Sample** | mj cal 2 |
| **Acq. Method** | thc quant 50 50.m | **Operator** | Anne Nord |
| **Sample Position** | P3-B1 | **Comment** | Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods |
| **Injection Volume** | 10 | | |
| **Acq. Date-Time** | 9/11/2024 6:46:24 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



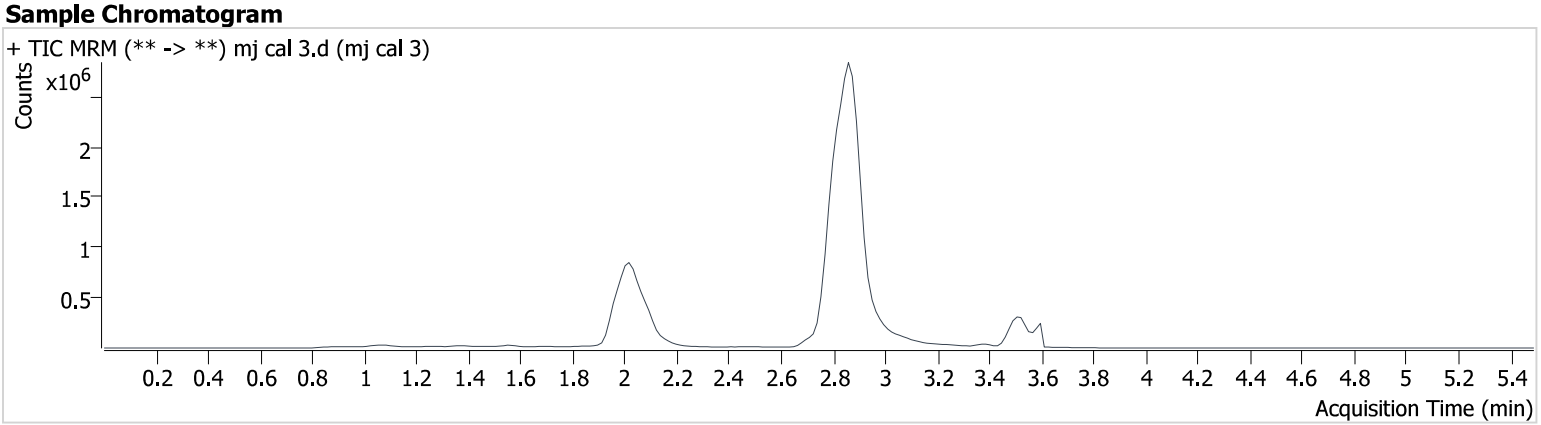

| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. | |
|---|---|---|---|---|---|---|---|---|
| THC-OH | 2.021 | 37330 | ∞ | 873.70 | ∞ | 4168692 | 2.952 ng/ml | Low |
| THC-COOH | 2.077 | 56171 | 163.6 | 290.48 | 243588.3 | 1574192 | 9.296 ng/ml | |
| THC | 3.528 | 87281 | ∞ | 23.70 | ∞ | 1239697 | 2.841 ng/ml | |

# AM #27 Cannabinoids

**Batch results** D:\MassHunter\Data\2024\am 27-28\091124\QuantResults\am 27.batch.bin
**Calibration Last Update** 9/12/2024 9:52:40 AM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | mj cal 3.d |
| **Type** | Cal | **Sample** | mj cal 3 |
| **Acq. Method** | thc quant 50 50.m | **Operator** | Anne Nord |
| **Sample Position** | P3-C1 | **Comment** | Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods |
| **Injection Volume** | 10 | | |
| **Acq. Date-Time** | 9/11/2024 6:53:00 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



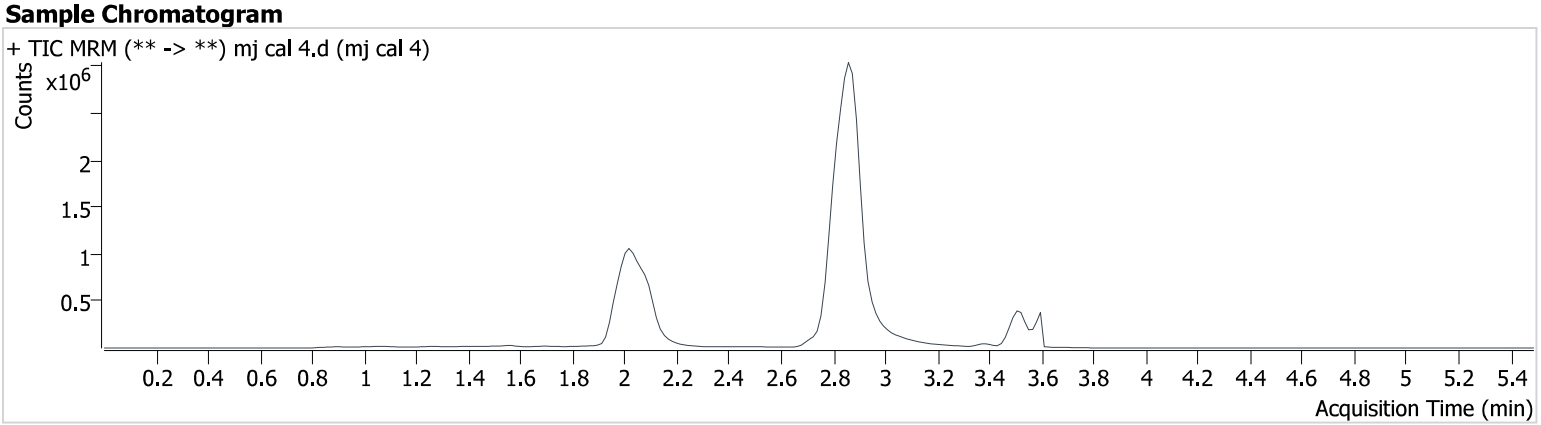

| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|---|---|---|---|---|---|---|---|
| THC-OH | 2.021 | 51836 | ∞ | 862.70 | ∞ | 3505205 | 4.625 ng/ml |
| THC-COOH | 2.077 | 119192 | 116119.8 | 274.30 | 238.5 | 1498012 | 19.258 ng/ml |
| THC | 3.528 | 130546 | 397.5 | 23.77 | ∞ | 1036861 | 4.762 ng/ml |

# AM #27 Cannabinoids

**Batch results** D:\MassHunter\Data\2024\am 27-28\091124\QuantResults\am 27.batch.bin
**Calibration Last Update** 9/12/2024 9:52:40 AM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | mj cal 4.d |
| **Type** | Cal | **Sample** | mj cal 4 |
| **Acq. Method** | thc quant 50 50.m | **Operator** | Anne Nord |
| **Sample Position** | P3-D1 | **Comment** | Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods |
| **Injection Volume** | 10 | | |
| **Acq. Date-Time** | 9/11/2024 6:59:36 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



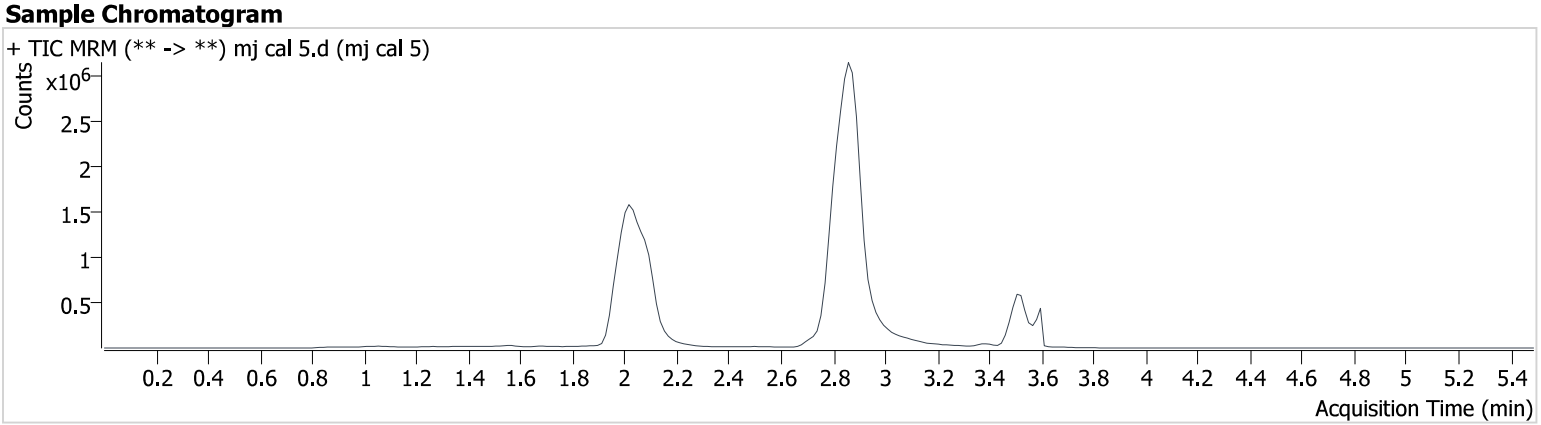

| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|---|---|---|---|---|---|---|---|
| THC-OH | 2.021 | 118998 | 796.2 | 858.14 | 5876.6 | 3802408 | 9.360 ng/ml |
| THC-COOH | 2.077 | 306850 | 10396.4 | 276.45 | 38433.9 | 1432934 | 49.806 ng/ml |
| THC | 3.528 | 272823 | ∞ | 23.62 | 1227.6 | 1060387 | 9.310 ng/ml |

# AM #27 Cannabinoids

**Batch results** D:\MassHunter\Data\2024\am 27-28\091124\QuantResults\am 27.batch.bin
**Calibration Last Update** 9/12/2024 9:52:40 AM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | mj cal 5.d |
| **Type** | Cal | **Sample** | mj cal 5 |
| **Acq. Method** | thc quant 50 50.m | **Operator** | Anne Nord |
| **Sample Position** | P3-E1 | **Comment** | Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods |
| **Injection Volume** | 10 | | |
| **Acq. Date-Time** | 9/11/2024 7:06:12 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



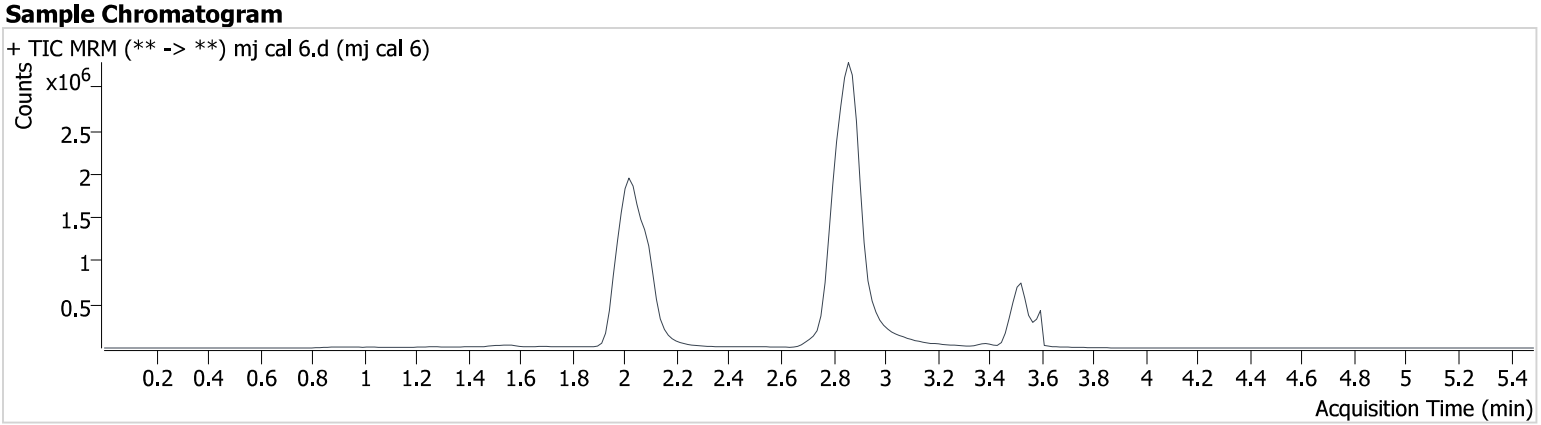

| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|---|---|---|---|---|---|---|---|
| THC-OH | 2.021 | 352962 | 1712.1 | 842.02 | ∞ | 4304111 | 23.903 ng/ml |
| THC-COOH | 2.077 | 507809 | 717686.8 | 279.22 | 1447.1 | 1519885 | 77.039 ng/ml |
| THC | 3.528 | 835065 | ∞ | 24.18 | 202.0 | 1204774 | 24.398 ng/ml |

# AM #27 Cannabinoids

**Batch results** D:\MassHunter\Data\2024\am 27-28\091124\QuantResults\am 27.batch.bin
**Calibration Last Update** 9/12/2024 9:52:40 AM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | mj cal 6.d |
| **Type** | Cal | **Sample** | mj cal 6 |
| **Acq. Method** | thc quant 50 50.m | **Operator** | Anne Nord |
| **Sample Position** | P3-F1 | **Comment** | Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods |
| **Injection Volume** | 10 | | |
| **Acq. Date-Time** | 9/11/2024 7:12:48 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



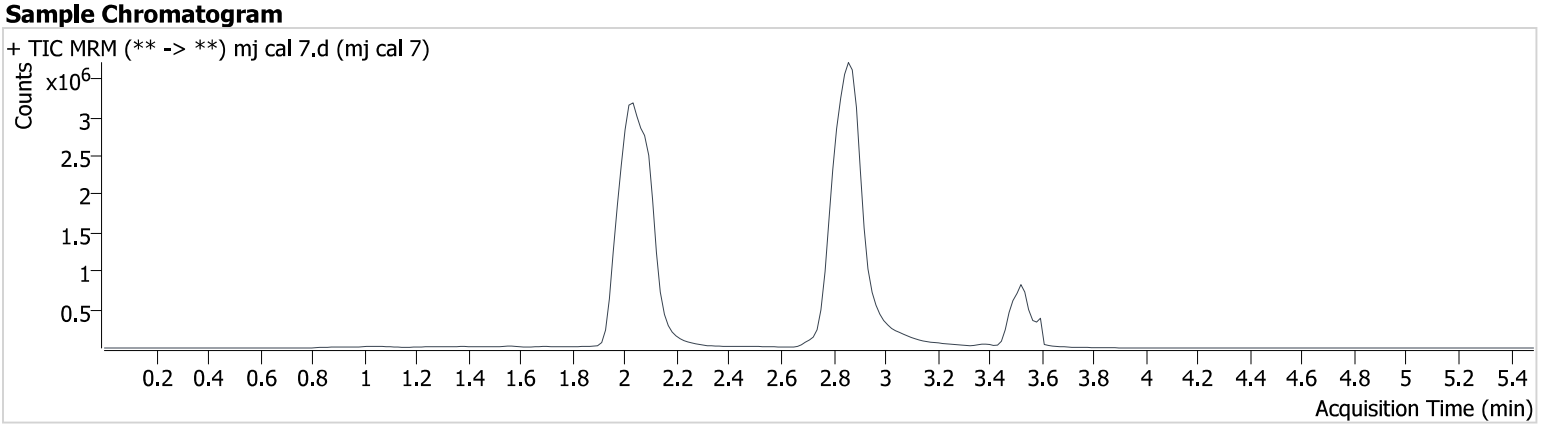

| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|---|---|---|---|---|---|---|---|
| THC-OH | 2.021 | 645339 | ∞ | 814.02 | ∞ | 3710310 | 50.268 ng/ml |
| THC-COOH | 2.077 | 602947 | 1168230.6 | 276.07 | 967.0 | 1438300 | 96.356 ng/ml |
| THC | 3.528 | 1510556 | ∞ | 25.10 | ∞ | 1044288 | 50.477 ng/ml |

# AM #27 Cannabinoids

**Batch results** D:\MassHunter\Data\2024\am 27-28\091124\QuantResults\am 27.batch.bin
**Calibration Last Update** 9/12/2024 9:52:40 AM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | mj cal 7.d |
| **Type** | Cal | **Sample** | mj cal 7 |
| **Acq. Method** | thc quant 50 50.m | **Operator** | Anne Nord |
| **Sample Position** | P3-G1 | **Comment** | Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods |
| **Injection Volume** | 10 | | |
| **Acq. Date-Time** | 9/11/2024 7:19:22 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**




| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|---|---|---|---|---|---|---|---|
| THC-OH | 2.021 | 1291783 | 14034.1 | 809.61 | ∞ | 3656179 | 101.715 ng/ml |
| THC-COOH | 2.077 | 1481654 | 2317.7 | 274.69 | 489416 0.7 | 1337301 | 252.697 ng/ml |
| THC | 3.528 | 2358172 | ∞ | 27.28 | ∞ | 811186 | 101.038 ng/ml |