








Worklist: 5462

| <u>LAB_CASE</u> | <u>ITEM</u> | <u>ITEM_TYPE</u> | <u>DESCRIPTION</u> | |
|-------------------------|--------------|------------------|--|---|
| M2021-5169 | 3 | UCK | AM 27 Urine Cannabinoids Confirmation by LC-QQQ |  |
| * M2021-5294 | 6 | BCK | AM 27 Urine Cannabinoids Confirmation by LC-QQQ |  |
| P2021-3838 | 1 | UCK | AM 27 Urine Cannabinoids Confirmation by LC-QQQ |  |
| P2021-4010 | 1 | BCK | AM 27 Blood THC Quant by LC-QQQ |  |
| P2021-4016 | 1 | BCK | AM 27 Blood THC Quant by LC-QQQ |  |
| P2021-4027 | 1 | BCK | AM 27 Blood THC Quant by LC-QQQ |  |
| P2021-4060 | 1 | BCK | AM 27 Blood THC Quant by LC-QQQ |  |

*See worklist 5478. Incorrect task was originally assigned to item.

SC

12/28/2021

Worklist: 5478

| <u>LAB_CASE</u> | <u>ITEM</u> | <u>ITEM_TYPE</u> | <u>DESCRIPTION</u> |
|-----------------|-------------|------------------|---------------------------------|
| M2021-5291 | 6 | BCK | AM 27 Blood THC Quant by LC-QQQ |



SC

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

Extraction Date: 12/16/21
Plate lot#: IDP-108-3-211018
Mobile phase A: 0.1% Formic Acid in LCMS Water
Blank Blood Lot: Lampire 20L20725
Column: UCT Selectra DA 100 x 2.1mm 3um
LCMS-QQQ ID: 069901

Analyst: Sarah Collins
Retest Date: 04/18/2022
Mobile phase B: 0.1% Formic acid in Acetonitrile
Blank Urine Lot: POC031319

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: add 1.5mL urine to blank plate, add 250µl 1N KOH. Shake and incubate at 40 degrees for 15 minutes. Using a calibrated pipette, add **1000µl blood and urine (if applicable) (calibrated pipette)** into the appropriate wells of analytical (standards) plate. **Pipette ID:** 3382167
- 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 4. Pipette **500µL 0.1% formic acid in water blood sample, 500 µL saturated phosphate buffer in urine** in wells of 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: 800 uL
- 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 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. Case sample response for THC 1ng/mL and OH-THC 3ng/mL (quantitative), Carboxy-THC: 5ng/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? (if not, describe in comments section)
- 6. Enter QCs into control charting.
- 7. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: Did not evaluate THC-OH due to interfering peak.

SC

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|-------------|-----------|---|--------------|-----------------|-----------------|
| A | IS + Cal. 1 | IS + QC_1 | | | p2021-4016-1* | IS + QC_1 blood |
| B | IS + Cal. 2 | | | | p2021-4010-1 | IS + Cal. 7 |
| C | IS + Cal. 3 | | | | m2021-5291-6* | IS + Cal. 6 |
| D | IS + Cal. 4 | | | | p2021-3838-1 | IS + Cal. 5 |
| E | IS + Cal. 5 | | | p2021-4016-1 | m2021-5169-3 | IS + Cal. 4 |
| F | IS + Cal. 6 | | | m2021-5291-6 | negative urine | IS + Cal. 3 |
| G | IS + Cal. 7 | | | p2021-4060-1 | negative blood | IS + Cal. 2 |
| H | IS + QC_1 | | | p2021-4027-1 | IS + QC_1 urine | IS + Cal. 1 |

All wells to contain 100 µl of residual DMSO

*Samples moved during analytical step 6 due to blood clot.

SC

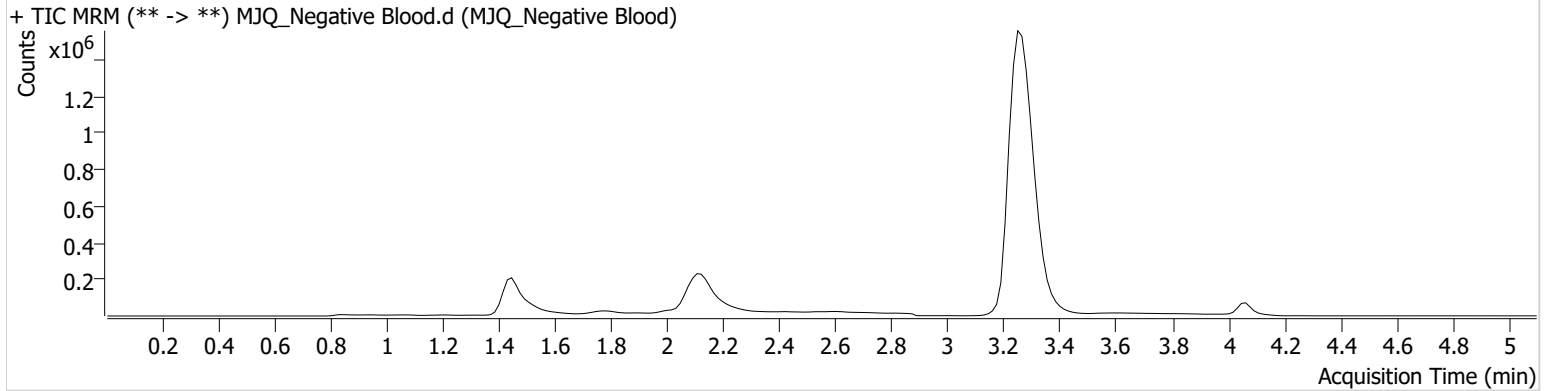


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Calibration Last Update 12/22/2021 6:51:05 AM

| | | | |
|-------------------------|-----------------------|------------------|----------------------|
| Instrument | Falco (069901) | Data File | MJQ_Negative Blood.d |
| Type | Sample | Sample | MJQ_Negative Blood |
| Acq. Method | AM 27 THCQ.m | Operator | Sarah Collins |
| Sample Position | P1-G5 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 12/16/2021 5:58:13 PM | | |
| Sample Info. | | | |

Sample Chromatogram



SC

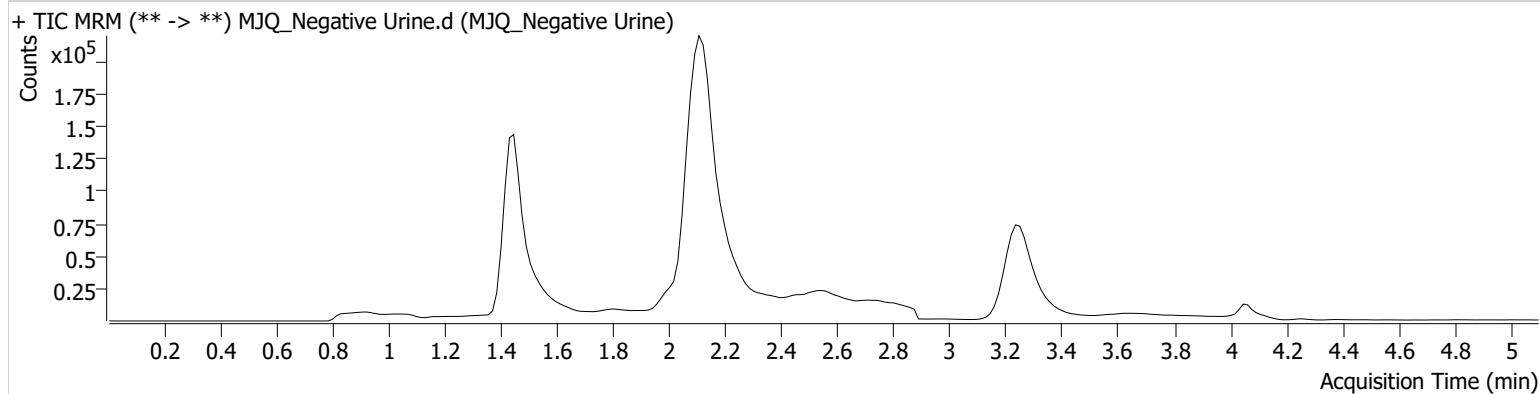


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Calibration Last Update 12/22/2021 6:51:05 AM

| | | | |
|-------------------------|-----------------------|------------------|----------------------|
| Instrument | Falco (069901) | Data File | MJQ_Negative Urine.d |
| Type | Sample | Sample | MJQ_Negative Urine |
| Acq. Method | AM 27 THCQ.m | Operator | Sarah Collins |
| Sample Position | P1-F5 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 12/16/2021 6:13:28 PM | | |
| Sample Info. | | | |

Sample Chromatogram



SC



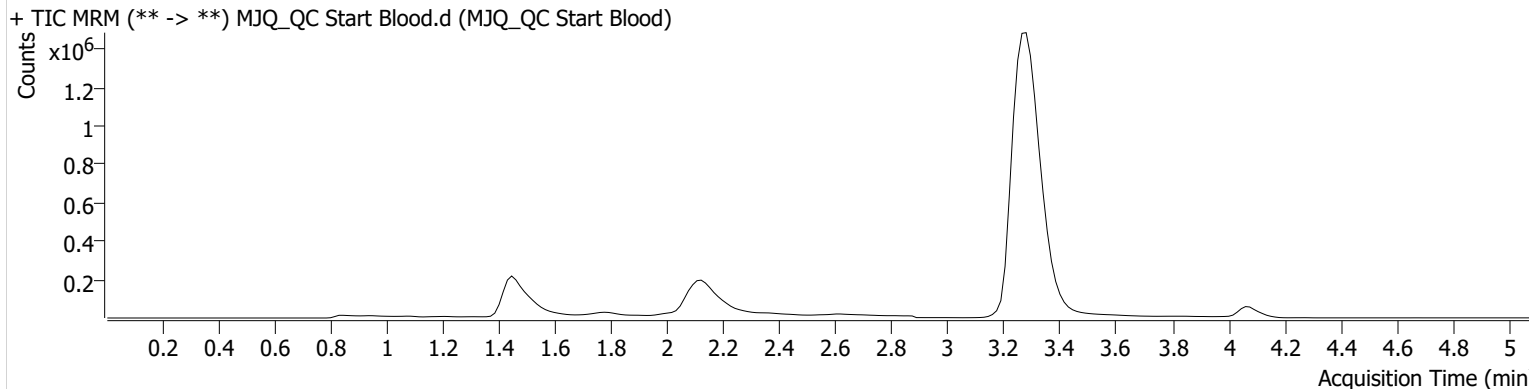
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Calibration Last Update 12/22/2021 6:51:05 AM

| | | | |
|-------------------------|-----------------------|------------------|----------------------|
| Instrument | Falco (069901) | Data File | MJQ_QC Start Blood.d |
| Type | Sample | Sample | MJQ_QC Start Blood |
| Acq. Method | AM 27 THCQ.m | Operator | Sarah Collins |
| Sample Position | P1-A6 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 12/16/2021 5:27:45 PM | | |

Sample Info.

Sample Chromatogram



| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|----------|-------|--------|---------|----------------|-----|------------|---------------|
| THC-COOH | 1.474 | 70204 | 117.07 | 68.0 | ∞ | 201310 | 13.8995 ng/ml |
| THC-OH | 1.513 | 201780 | ∞ | 6.0 Low | ∞ | 716032 | 6.9667 ng/ml |
| THC | 3.285 | 415223 | 3796.66 | 26.7 | ∞ | 10039120 | 4.8695 ng/ml |

SC

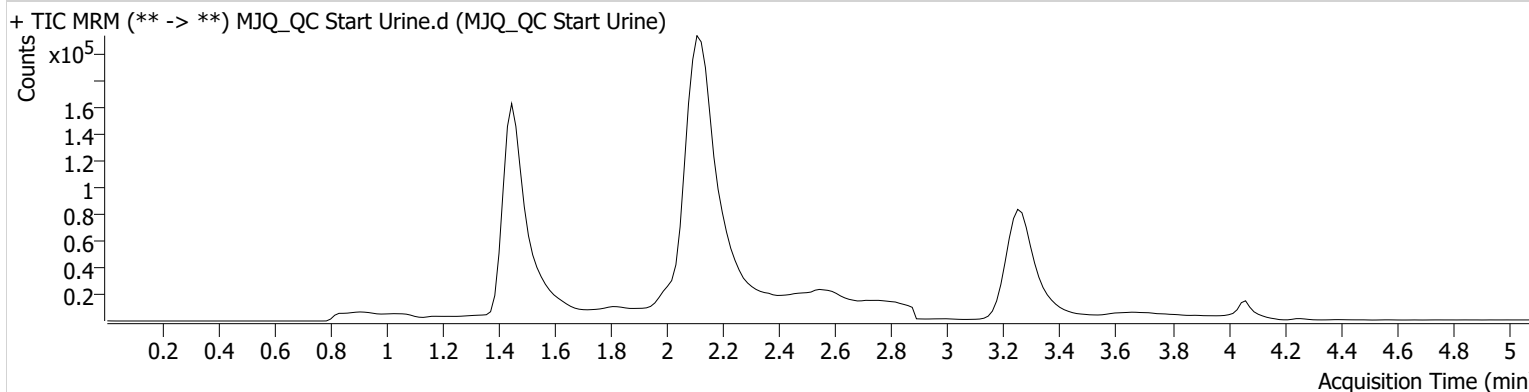


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Calibration Last Update 12/22/2021 6:51:05 AM

| | | | |
|-------------------------|-----------------------|------------------|----------------------|
| Instrument | Falco (069901) | Data File | MJQ_QC Start Urine.d |
| Type | Sample | Sample | MJQ_QC Start Urine |
| Acq. Method | AM 27 THCQ.m | Operator | Sarah Collins |
| Sample Position | P1-H5 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 12/16/2021 5:42:59 PM | | |

Sample Chromatogram



| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|----------|-------|-------|--------|-------|-------|------------|---------------|
| THC-COOH | 1.474 | 56746 | 156.15 | 67.7 | ∞ | 143455 | 15.6946 ng/ml |
| THC | 3.270 | 25326 | ∞ | 30.2 | 27.52 | 588155 | 5.0705 ng/ml |

SC

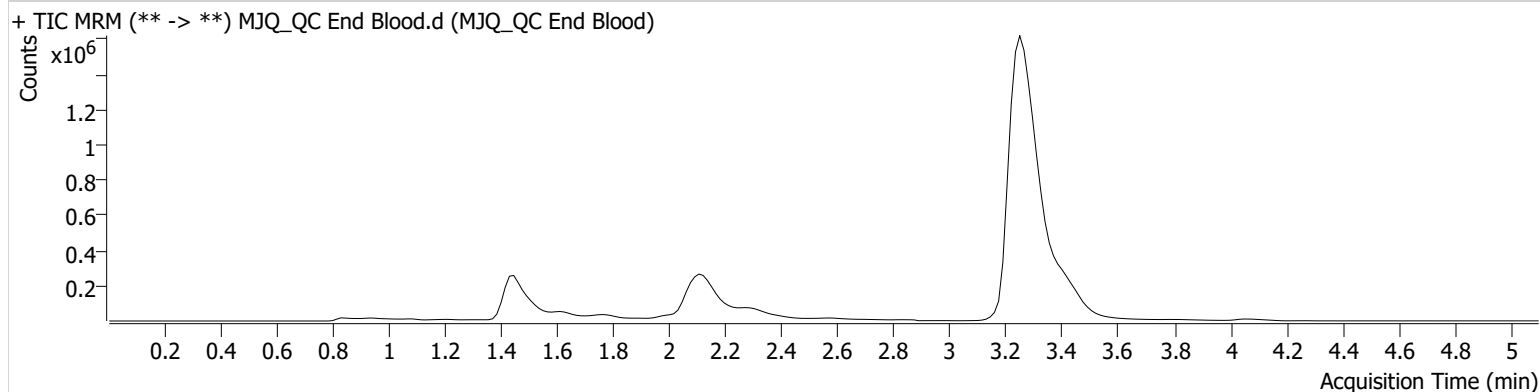


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Calibration Last Update 12/22/2021 6:51:05 AM

| | | | |
|-------------------------|-----------------------|------------------|--------------------|
| Instrument | Falco (069901) | Data File | MJQ_QC End Blood.d |
| Type | Sample | Sample | MJQ_QC End Blood |
| Acq. Method | AM 27 THCQ.m | Operator | Sarah Collins |
| Sample Position | P1-A6 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 12/16/2021 8:15:13 PM | | |
| Sample Info. | | | |

Sample Chromatogram



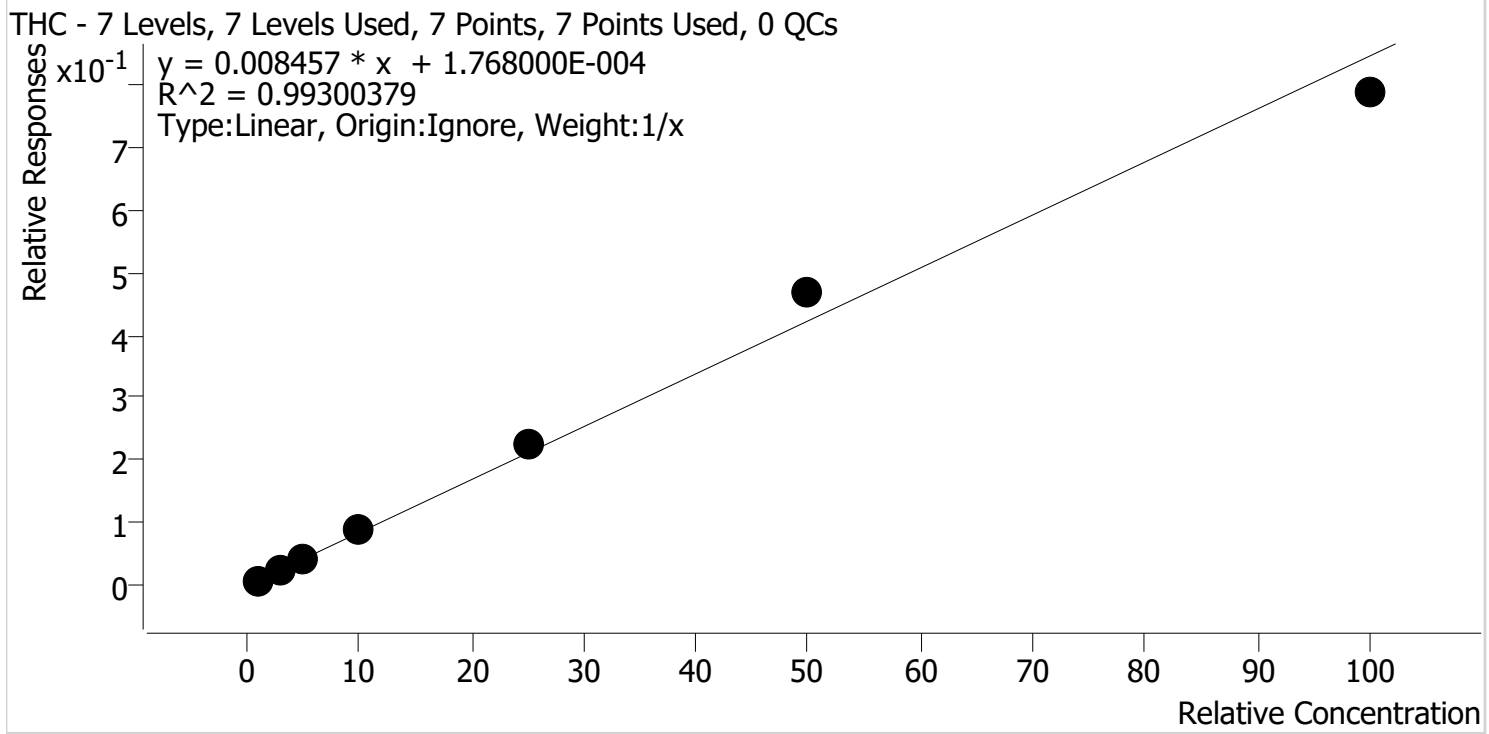
| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|----------|-------|--------|---------|-------|--------|------------|---------------|
| THC-COOH | 1.474 | 74561 | ∞ | 70.7 | 687.72 | 214172 | 13.8765 ng/ml |
| THC-OH | 1.513 | 231282 | ∞ | 6.4 | ∞ | 928073 | 4.4780 ng/ml |
| THC | 3.270 | 484475 | 2114.27 | 28.2 | ∞ | 12094264 | 4.7156 ng/ml |

SC



AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Last Cal. Update 12/22/2021 6:51 AM
Analyst Name ISP\Datastor
Analyte THC **Internal Standard** THC-D3



| Sample | Level | Enabled | Expected Concentration | Final Concentration | Accuracy |
|-----------|-------|---------|------------------------|---------------------|----------|
| MJQ_Cal 1 | 1 | ✓ | 1.0 | 0.9 | 92.1 |
| MJQ_Cal 2 | 2 | ✓ | 3.0 | 2.9 | 97.5 |
| MJQ_Cal 3 | 3 | ✓ | 5.0 | 4.8 | 95.6 |
| MJQ_Cal 4 | 4 | ✓ | 10.0 | 10.4 | 104.5 |
| MJQ_Cal 5 | 5 | ✓ | 25.0 | 26.8 | 107.1 |
| MJQ_Cal 6 | 6 | ✓ | 50.0 | 55.1 | 110.2 |
| MJQ_Cal 7 | 7 | ✓ | 100.0 | 93.1 | 93.1 |

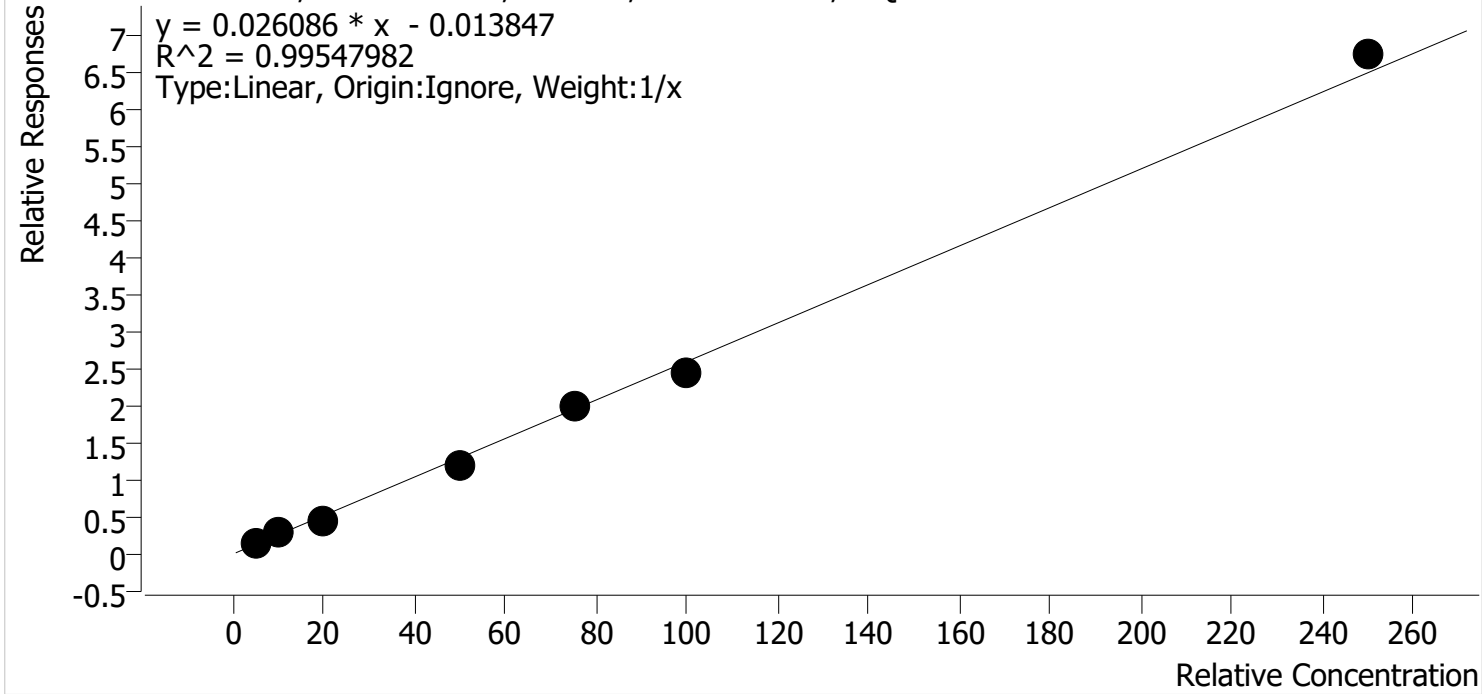
SC



AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Last Cal. Update 12/22/2021 6:51 AM
Analyst Name ISP\Datastor
Analyte THC-COOH **Internal Standard** THC-COOH-D9

THC-COOH - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 0 QCs



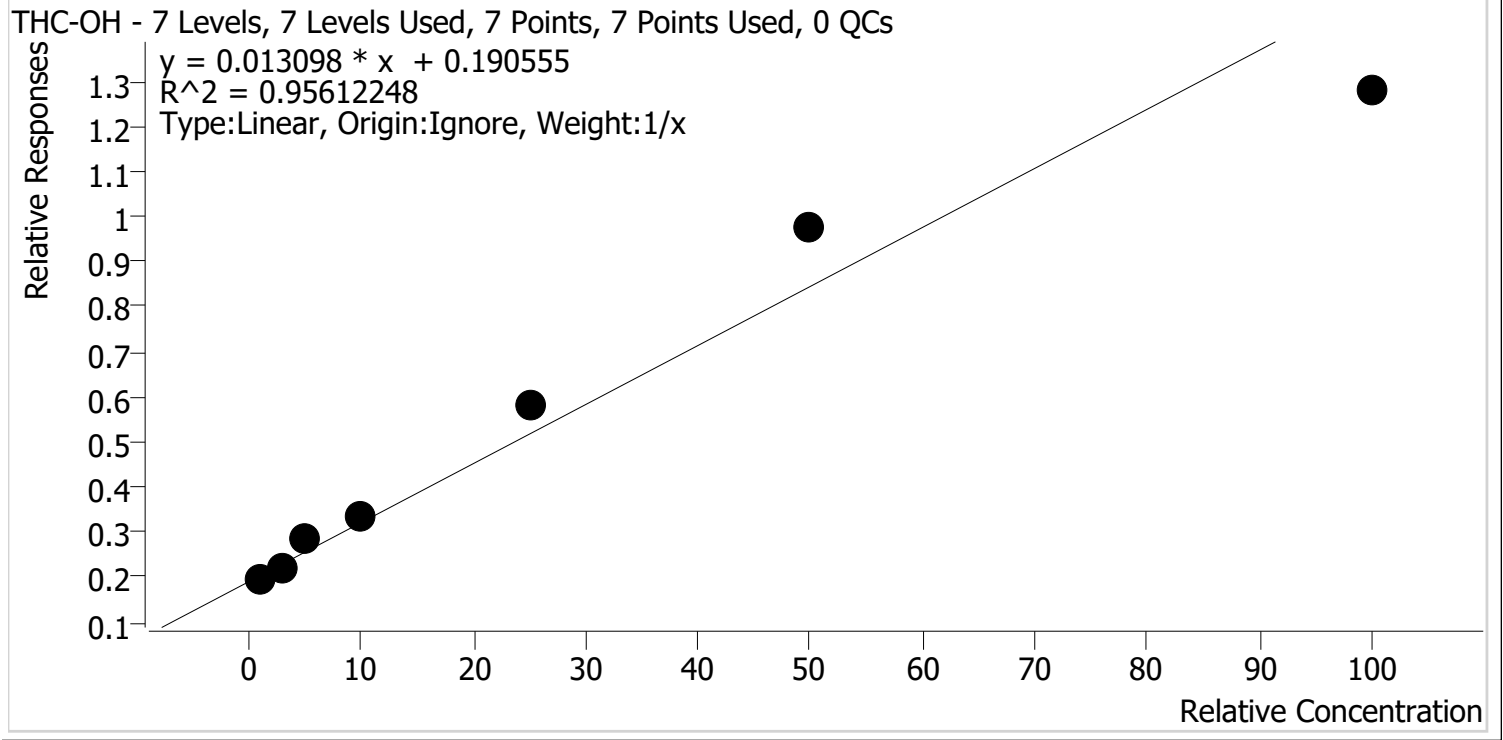
| Sample | Level | Enabled | Expected Concentration | Final Concentration | Accuracy |
|-----------|-------|---------|------------------------|---------------------|----------|
| MJQ_Cal 1 | 1 | ✓ | 5.0 | 5.8 | 115.9 |
| MJQ_Cal 2 | 2 | ✓ | 10.0 | 10.6 | 105.6 |
| MJQ_Cal 3 | 3 | ✓ | 20.0 | 17.3 | 86.6 |
| MJQ_Cal 4 | 4 | ✓ | 50.0 | 45.4 | 90.7 |
| MJQ_Cal 5 | 5 | ✓ | 75.0 | 77.7 | 103.5 |
| MJQ_Cal 6 | 6 | ✓ | 100.0 | 93.9 | 93.9 |
| MJQ_Cal 7 | 7 | ✓ | 250.0 | 259.4 | 103.7 |

SC



AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Last Cal. Update 12/22/2021 6:51 AM
Analyst Name ISP\Datastor
Analyte THC-OH **Internal Standard** THC-OH-D3



| Sample | Level | Enabled | Expected Concentration | Final Concentration | Accuracy |
|-----------|-------|---------|------------------------|---------------------|----------|
| MJQ_Cal 1 | 1 | ✓ | 1.0 | 0.5 | 50.5 |
| MJQ_Cal 2 | 2 | ✓ | 3.0 | 2.1 | 70.8 |
| MJQ_Cal 3 | 3 | ✓ | 5.0 | 7.4 | 148.0 |
| MJQ_Cal 4 | 4 | ✓ | 10.0 | 10.8 | 107.8 |
| MJQ_Cal 5 | 5 | ✓ | 25.0 | 29.8 | 119.1 |
| MJQ_Cal 6 | 6 | ✓ | 50.0 | 60.3 | 120.6 |
| MJQ_Cal 7 | 7 | ✓ | 100.0 | 83.1 | 83.1 |

Did not evaluate.

SC

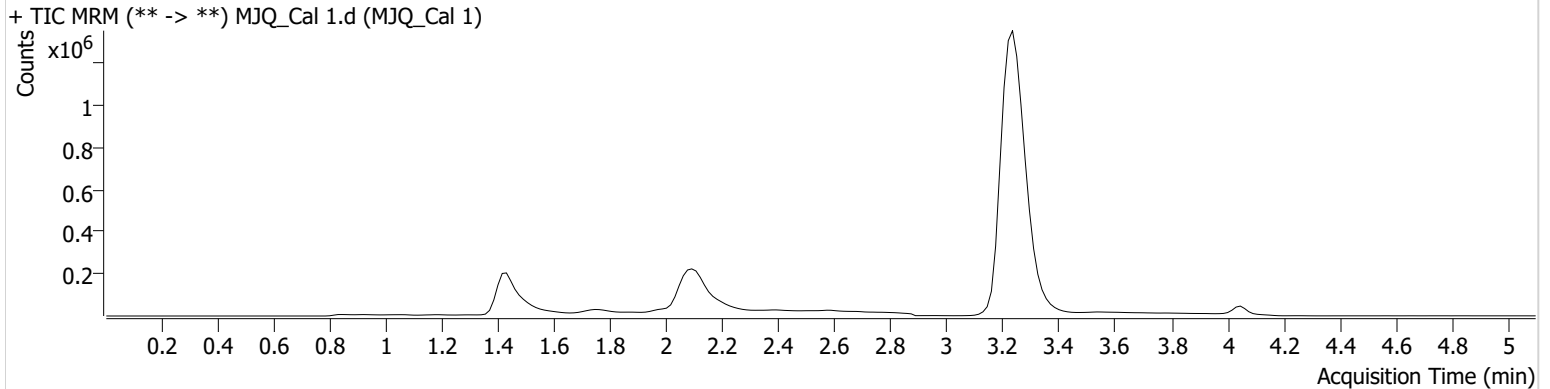


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Calibration Last Update 12/22/2021 6:51:05 AM

| | | | |
|-------------------------|-----------------------|------------------|---------------|
| Instrument | Falco (069901) | Data File | MJQ_Cal 1.d |
| Type | Cal | Sample | MJQ_Cal 1 |
| Acq. Method | AM 27 THCQ.m | Operator | Sarah Collins |
| Sample Position | P1-H6 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 12/16/2021 3:57:59 PM | | |

Sample Chromatogram



| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|----------|-------|--------|--------|----------------|--------|------------|-------------------------|
| THC-COOH | 1.459 | 26732 | 61.87 | 52.7 | 104.60 | 194732 | 5.7932 ng/ml |
| THC-OH | 1.498 | 141128 | ∞ | 2.8 Low | 12.11 | 715758 | 0.5053 ng/ml Low |
| THC | 3.239 | 66240 | 387.96 | 27.4 | 462.08 | 8313927 | 0.9212 ng/ml Low |

SC

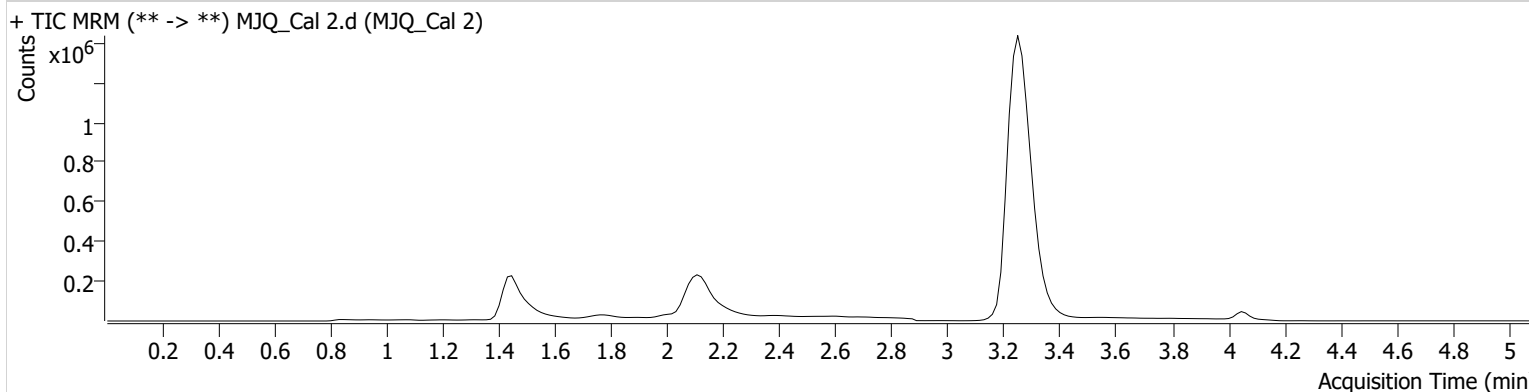


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Calibration Last Update 12/22/2021 6:51:05 AM

| | | | |
|-------------------------|-----------------------|------------------|---------------|
| Instrument | Falco (069901) | Data File | MJQ_Cal 2.d |
| Type | Cal | Sample | MJQ_Cal 2 |
| Acq. Method | AM 27 THCQ.m | Operator | Sarah Collins |
| Sample Position | P1-G6 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 12/16/2021 4:05:46 PM | | |

Sample Chromatogram



| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|----------|-------|--------|---------|----------------|--------|------------|-------------------------|
| THC-COOH | 1.474 | 51752 | ∞ | 56.0 | 384.03 | 197854 | 10.5579 ng/ml |
| THC-OH | 1.513 | 158630 | ∞ | 4.4 Low | 36.39 | 726357 | 2.1253 ng/ml Low |
| THC | 3.270 | 209202 | 1526.58 | 25.8 | 396.22 | 8399601 | 2.9240 ng/ml |

SC



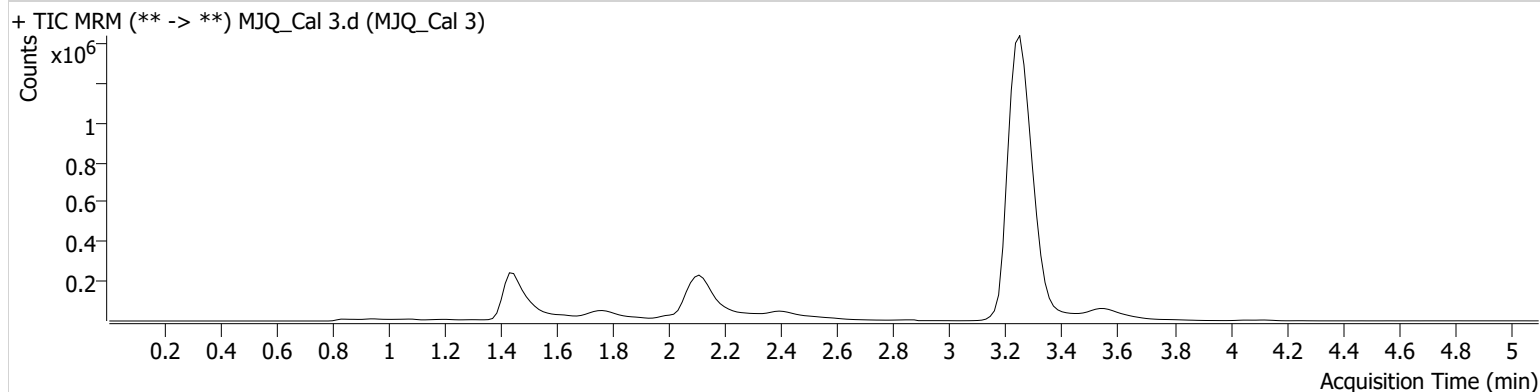
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Calibration Last Update 12/22/2021 6:51:05 AM

| | | | |
|-------------------------|-----------------------|------------------|---------------|
| Instrument | Falco (069901) | Data File | MJQ_Cal 3.d |
| Type | Cal | Sample | MJQ_Cal 3 |
| Acq. Method | AM 27 THCQ.m | Operator | Sarah Collins |
| Sample Position | P1-F6 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 12/16/2021 4:13:23 PM | | |

Sample Info.

Sample Chromatogram



| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|----------|-------|--------|-------|----------------|--------|------------|---------------|
| THC-COOH | 1.474 | 91116 | 60.97 | 59.1 | 282.70 | 208094 | 17.3161 ng/ml |
| THC-OH | 1.513 | 195384 | ∞ | 5.9 Low | ∞ | 679634 | 7.4004 ng/ml |
| THC | 3.254 | 344563 | ∞ | 26.1 | 227.14 | 8487702 | 4.7791 ng/ml |

SC

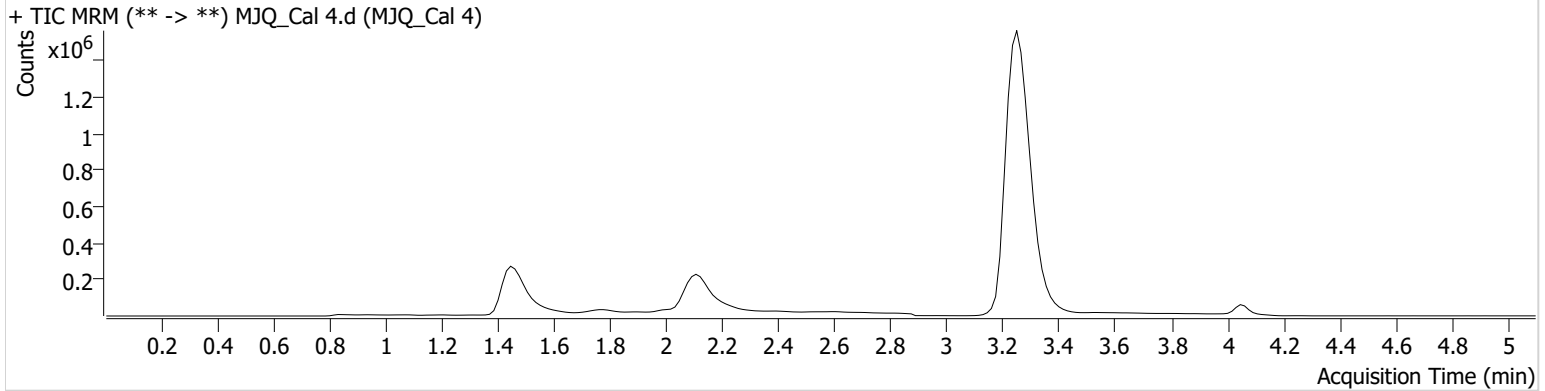


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Calibration Last Update 12/22/2021 6:51:05 AM

| | | | |
|-------------------------|-----------------------|------------------|---------------|
| Instrument | Falco (069901) | Data File | MJQ_Cal 4.d |
| Type | Cal | Sample | MJQ_Cal 4 |
| Acq. Method | AM 27 THCQ.m | Operator | Sarah Collins |
| Sample Position | P1-E6 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 12/16/2021 4:21:01 PM | | |

Sample Chromatogram



| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|----------|-------|--------|---------|-------|---------|------------|---------------|
| THC-COOH | 1.474 | 226294 | 1836.57 | 65.8 | 343.25 | 193452 | 45.3736 ng/ml |
| THC-OH | 1.513 | 233837 | ∞ | 6.5 | 53.17 | 704774 | 10.7832 ng/ml |
| THC | 3.270 | 775611 | 8175.41 | 25.0 | 1047.03 | 8758518 | 10.4498 ng/ml |

SC

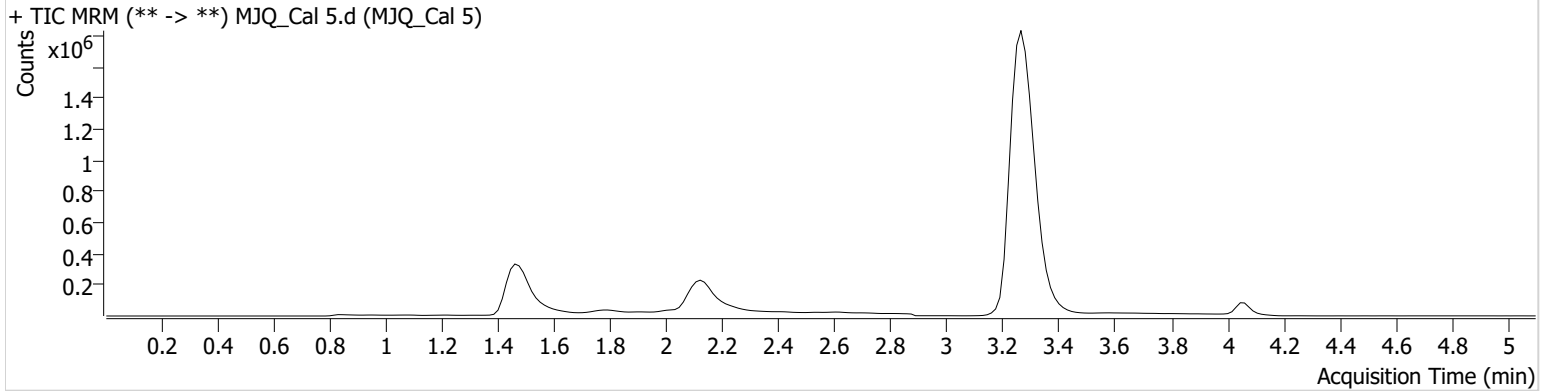


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Calibration Last Update 12/22/2021 6:51:05 AM

| | | | |
|-------------------------|-----------------------|------------------|---------------|
| Instrument | Falco (069901) | Data File | MJQ_Cal 5.d |
| Type | Cal | Sample | MJQ_Cal 5 |
| Acq. Method | AM 27 THCQ.m | Operator | Sarah Collins |
| Sample Position | P1-D6 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 12/16/2021 4:28:37 PM | | |

Sample Chromatogram



| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|----------|------------------|---------|----------|-------|-----|------------|---------------|
| THC-COOH | 1.489 | 378823 | 560.55 | 65.8 | ∞ | 188294 | 77.6551 ng/ml |
| THC-OH | 1.453 Low | 395163 | ∞ | 9.0 | ∞ | 680663 | 29.7762 ng/ml |
| THC | 3.285 | 1990898 | 12626.75 | 25.9 | ∞ | 8785347 | 26.7739 ng/ml |

SC

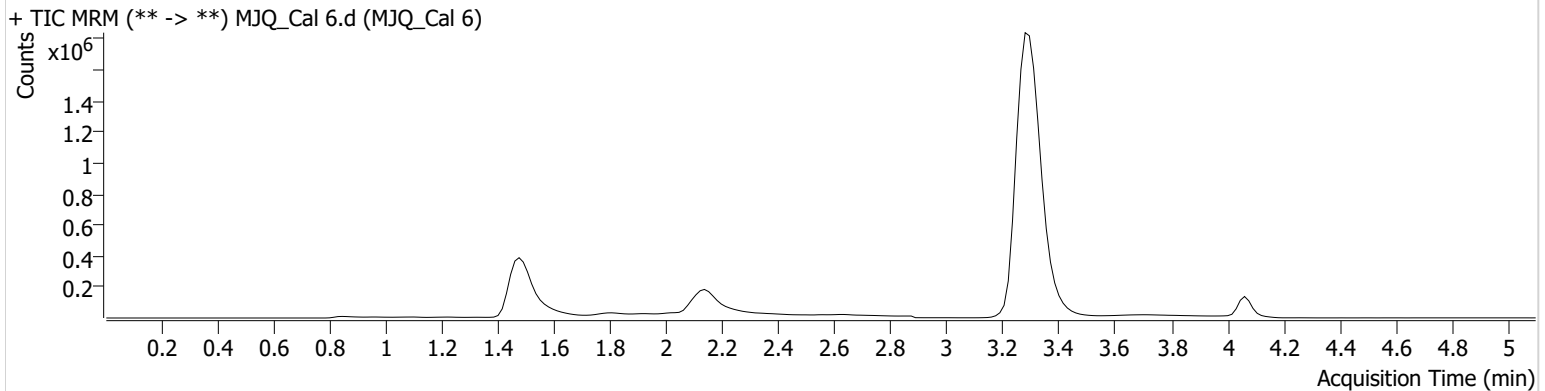


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Calibration Last Update 12/22/2021 6:51:05 AM

| | | | |
|-------------------------|-----------------------|------------------|---------------|
| Instrument | Falco (069901) | Data File | MJQ_Cal 6.d |
| Type | Cal | Sample | MJQ_Cal 6 |
| Acq. Method | AM 27 THCQ.m | Operator | Sarah Collins |
| Sample Position | P1-C6 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 12/16/2021 4:36:12 PM | | |

Sample Chromatogram



| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|----------|------------------|---------|----------|------------------|---------|------------|---------------|
| THC-COOH | 1.489 | 411840 | ∞ | 71.4 | 3500.81 | 169004 | 93.9471 ng/ml |
| THC-OH | 1.468 Low | 614699 | ∞ | 10.8 High | 487.32 | 627222 | 60.2760 ng/ml |
| THC | 3.300 | 3356108 | 22488.59 | 25.3 | 3000.90 | 7200205 | 55.0919 ng/ml |

SC

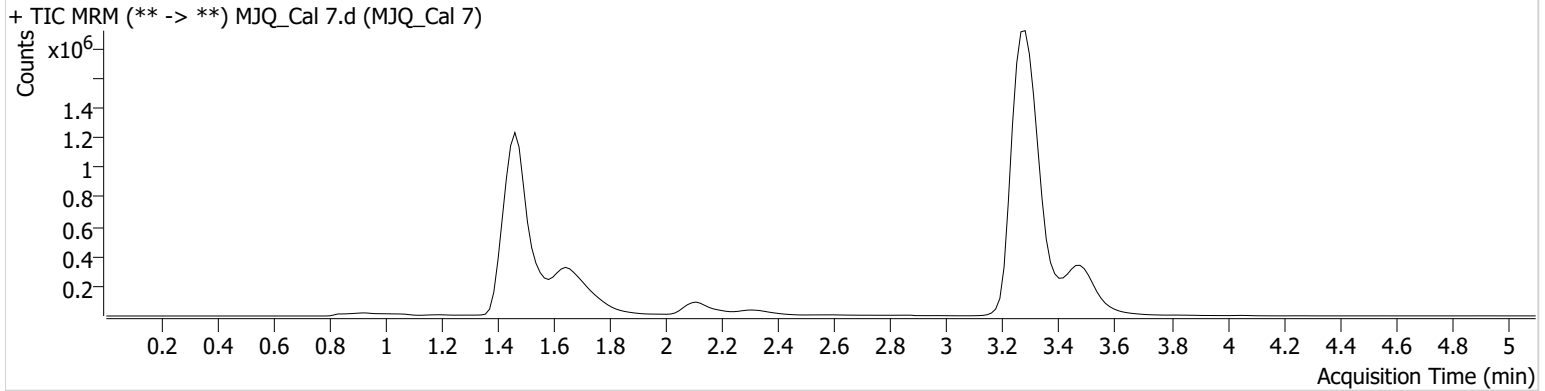


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2021\AM 27-28\121621 AM 27 28 SC\QuantResults\AM 27.batch.bin
Calibration Last Update 12/22/2021 6:51:05 AM

| | | | |
|-------------------------|-----------------------|------------------|---------------|
| Instrument | Falco (069901) | Data File | MJQ_Cal 7.d |
| Type | Cal | Sample | MJQ_Cal 7 |
| Acq. Method | AM 27 THCQ.m | Operator | Sarah Collins |
| Sample Position | P1-B6 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 12/16/2021 5:12:22 PM | | |

Sample Chromatogram



| Name | RT | Resp. | S/N | Ratio | S/N | ISTD Resp. | Final Conc. |
|----------|------------------|---------|----------|------------------|---------|------------|----------------|
| THC-COOH | 1.474 | 2198285 | ∞ | 57.5 | ∞ | 325587 | 259.3571 ng/ml |
| THC-OH | 1.438 Low | 1512079 | 821.51 | 13.8 High | 2450.48 | 1181851 | 83.1336 ng/ml |
| THC | 3.285 | 4854884 | 70901.75 | 28.3 | ∞ | 6167061 | 93.0602 ng/ml |