

# Analysis: HA(75:25)re-1

**Path:** Home/YL Research

**Based on method:** Triplets Method

|                |                      |                   |
|----------------|----------------------|-------------------|
| Created        | 06-Jun-2019 17:06:05 | visionCATSuser    |
| Modified       | 06-Jun-2019 18:38:02 | visionCATSuser    |
| Last HPTLC log | 06-Jun-2019 18:38:02 | Analysis modified |
| Explorer notes |                      |                   |

| Track | Vial ID     | Description   | Volume | Position | Type      |
|-------|-------------|---------------|--------|----------|-----------|
| 1     | MeOH blank  | MeOH Blank    | 2.0 µl | A1       | Sample    |
| 2     | Mixture 100 | Mixture 500ng | 5.0 µl | A2       | Sample    |
| 3     | 9-THC 100   | D9-THC 500ng  | 5.0 µl | A3       | Reference |
| 4     | CBD 100     | CBD 500ng     | 5.0 µl | A4       | Reference |
| 5     | CBN 100     | CBN 500ng     | 5.0 µl | A5       | Reference |
| 6     | CBG 100     | CBG 500ng     | 5.0 µl | A6       | Reference |
| 7     | CBC 100     | CBC 500ng     | 5.0 µl | A7       | Reference |
| 8     | THCV 100    | THCV 500ng    | 5.0 µl | A8       | Reference |
| 9     | CBDV 100    | CBDV 500ng    | 5.0 µl | A9       | Reference |
| 10    | 8-THC 100   | D8-THC 500ng  | 5.0 µl | A10      | Reference |
| 11    | THCA-A 100  | THCA-A 500ng  | 5.0 µl | A11      | Reference |
| 12    | CBDA 100    | CBDA 500ng    | 5.0 µl | B1       | Reference |
| 13    | CBGA 100    | CBGA 500ng    | 5.0 µl | B2       | Reference |
| 14    | Mixture 100 | Mixture 500ng | 5.0 µl | A2       | Sample    |
| 15    | MeOH blank  | MeOH Blank    | 2.0 µl | A1       | Sample    |

Sequence table notes

A track marked with ⚠ means: the application type is overridden in some evaluation(s).

## System setup:

|                    |                                     |
|--------------------|-------------------------------------|
| Software           | Server User-PC, version 2.5.18072.1 |
| ATS4               | S/N:080713                          |
| Chamber            | N/A                                 |
| Derivatization dip | N/A                                 |
| Scanner3           | S/N:031025                          |
| Visualizer         | S/N:230515                          |

## Chromatography

### Plate layout:

|                        |                                                    |
|------------------------|----------------------------------------------------|
| Stationary phase       | Merck, HPTLC plates silica gel 60 F 254            |
| Plate format           | 200.0 x 100.0 mm                                   |
| Application type       | User                                               |
| Application            | Position Y: 10.0 mm, length: 8.0 mm, width: 0.0 mm |
| Track                  | First position X: 20.0 mm, distance: 11.4 mm       |
| Solvent front position | 70.0 mm                                            |
| Notes                  |                                                    |

Take image clean plate 1a - Visualizer (S/N: 230515):

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|                          |                                      |
|--------------------------|--------------------------------------|
| Quality                  | Enhanced                             |
| RT White                 | auto capture, Auto, level 85 %, Band |
| R 254                    | auto capture, Auto, level 85 %, Band |
| Instrument diagnostics   | Valid diagnostics                    |
| Documentation step label |                                      |
| Notes                    |                                      |

### Application 1 - ATS 4 (S/N: 080713):

|                         |                   |
|-------------------------|-------------------|
| Spray gas               | NI                |
| Sample solvent type     | Methanol          |
| Filling speed           | 15 µl/s           |
| Predosage volume        | 200 nl            |
| Retraction volume       | 200 nl            |
| Dosage speed            | 150 nl/s          |
| Filling quality         | User              |
| Rinsing cycles / vacuum | 1 / 4 s           |
| Filling cycles / vacuum | 1 / 4 s           |
| Rinsing solvent name    | Methanol          |
| Nozzle temperature      | Unheated          |
| Rack in use             | Standard          |
| Instrument diagnostics  | Valid diagnostics |
| Notes                   |                   |

### Development 1 - Chamber:

|                      |                  |
|----------------------|------------------|
| Tank                 | TTC 20x10        |
| Mobile phase         |                  |
| Saturation time      | 20 min           |
| Use saturation pad   | true             |
| Use smartALERT       | false            |
| Volume front through | 10 ml            |
| Volume rear through  | 20 ml            |
| Drying time          | 5 min            |
| Drying temperature   | Room temperature |
| Notes                |                  |

### Take image developed plate 1a - Visualizer (S/N: 230515):

|                          |                                      |
|--------------------------|--------------------------------------|
| Quality                  | Enhanced                             |
| RT White                 | auto capture, Auto, level 85 %, Band |
| R 254                    | auto capture, Auto, level 85 %, Band |
| R 366                    | auto capture, Auto, level 85 %, Band |
| Instrument diagnostics   | Valid diagnostics                    |
| Documentation step label |                                      |
| Notes                    |                                      |

### Scan developed plate 1b - Scanner 3 (S/N: 031025):

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|                          |                      |
|--------------------------|----------------------|
| Scanner type             | Single $\lambda$     |
| Optimization for         | Resolution           |
| Measurement mode         | Absorption           |
| Filter                   | n/a                  |
| Detector mode            | Automatic            |
| Scanning speed           | 20 mm/s              |
| Data resolution          | 100 $\mu$ m/step     |
| Slit                     | 5 x 0.2 mm, micro    |
| Partial scan             | No                   |
| Lamp                     | Deuterium & Tungsten |
| Wavelength(s)            | 254 nm               |
| Instrument diagnostics   | Valid diagnostics    |
| Documentation step label |                      |
| Notes                    |                      |

### Derivatization 1 - dip:

|                     |                                    |
|---------------------|------------------------------------|
| Reagent name        | Fast Blue B salt                   |
| Dipping speed       | 3                                  |
| Dipping time        | 5 s                                |
| Reagent preparation | 1g Fast Blue B salt in 200mL water |
| Heating             | none                               |
| Notes               | Air dry for 5 minutes              |

### Take image derivatized plate 1a - Visualizer (S/N: 230515):

|                          |                                      |
|--------------------------|--------------------------------------|
| Quality                  | Enhanced                             |
| RT White                 | auto capture, Auto, level 85 %, Band |
| R 366                    | auto capture, Auto, level 85 %, Band |
| Instrument diagnostics   | Valid diagnostics                    |
| Documentation step label |                                      |
| Notes                    |                                      |

### System suitability tests:

#### SST settings:

|            |  |
|------------|--|
| SST tracks |  |
|------------|--|

### Data acquisition

#### Application 1 - ATS 4 (S/N: 080713):

|          |                                     |
|----------|-------------------------------------|
| Executed | 06-Jun-2019 17:10:31 visionCATSuser |
|----------|-------------------------------------|

#### Development 1 - Chamber:

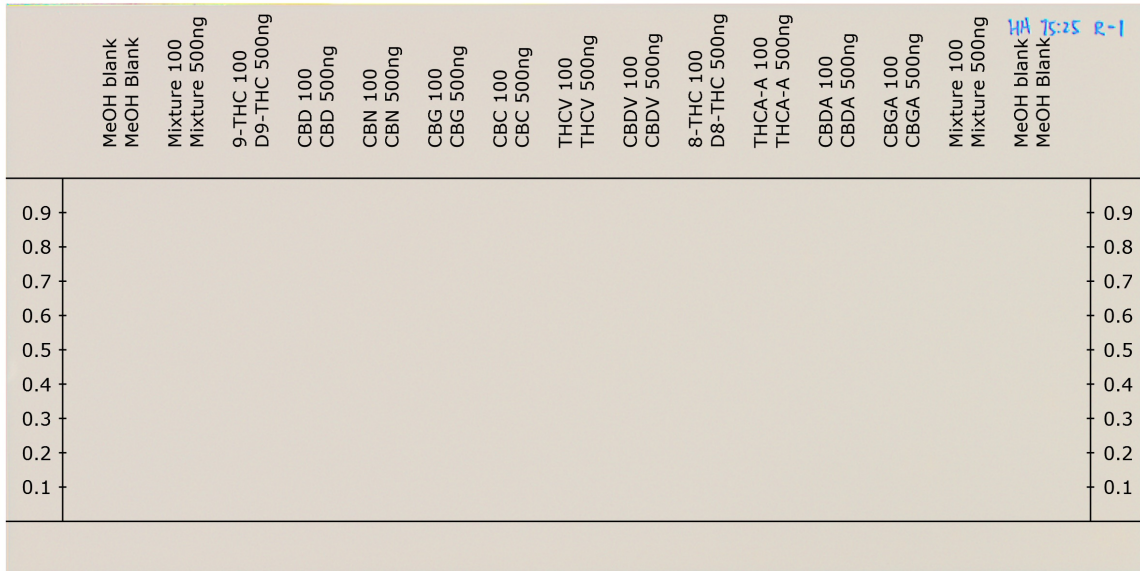
|          |                                     |
|----------|-------------------------------------|
| Executed | 06-Jun-2019 17:41:34 visionCATSuser |
|----------|-------------------------------------|

#### Take image developed plate 1a - Visualizer (S/N: 230515):

|          |                                     |
|----------|-------------------------------------|
| Executed | 06-Jun-2019 18:27:01 visionCATSuser |
|----------|-------------------------------------|

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RT White

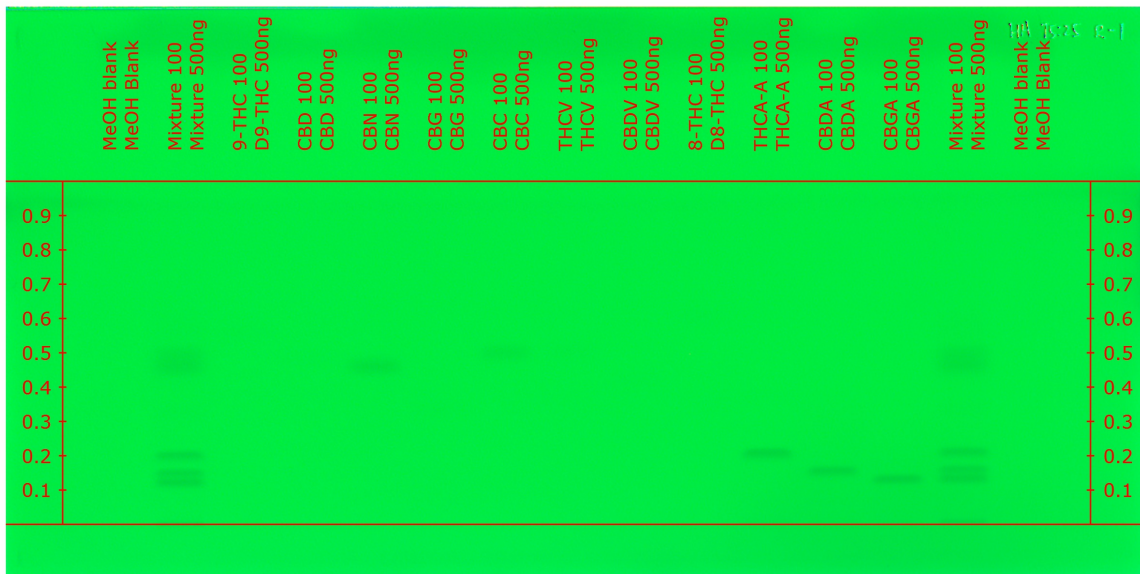
visionCATS  
Developed, RemTransVis



|                     |                  |
|---------------------|------------------|
| Exposure            | 0.088 s          |
| Contrast            | 1                |
| Normalized exposure | Disabled         |
| Clarify             | Disabled         |
| White balance       | 1.00, 1.00, 1.00 |

R 254

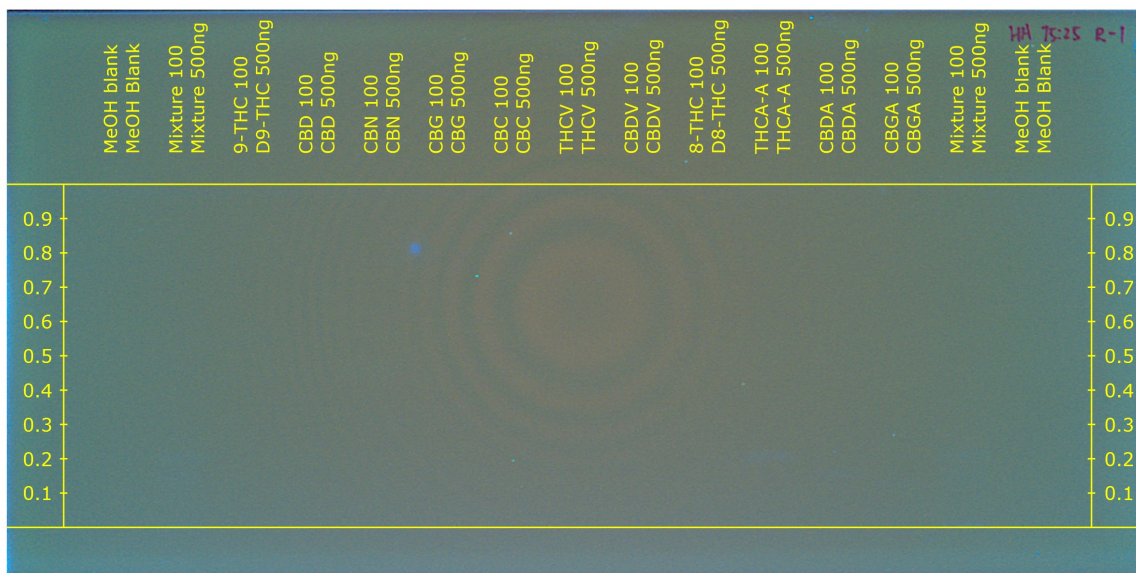
Developed, Remission254



|                     |                  |
|---------------------|------------------|
| Exposure            | 0.278 s          |
| Contrast            | 1                |
| Normalized exposure | Disabled         |
| Clarify             | Disabled         |
| White balance       | 1.00, 1.00, 1.00 |

HA(75:25)re-1  
R 366

visionCATS  
Developed, Remission366



|                     |                  |
|---------------------|------------------|
| Exposure            | 9.999 s          |
| Contrast            | 1                |
| Normalized exposure | Disabled         |
| Clarify             | Disabled         |
| White balance       | 1.00, 1.00, 1.00 |

## Scan developed plate 1b - Scanner 3 (S/N: 031025):

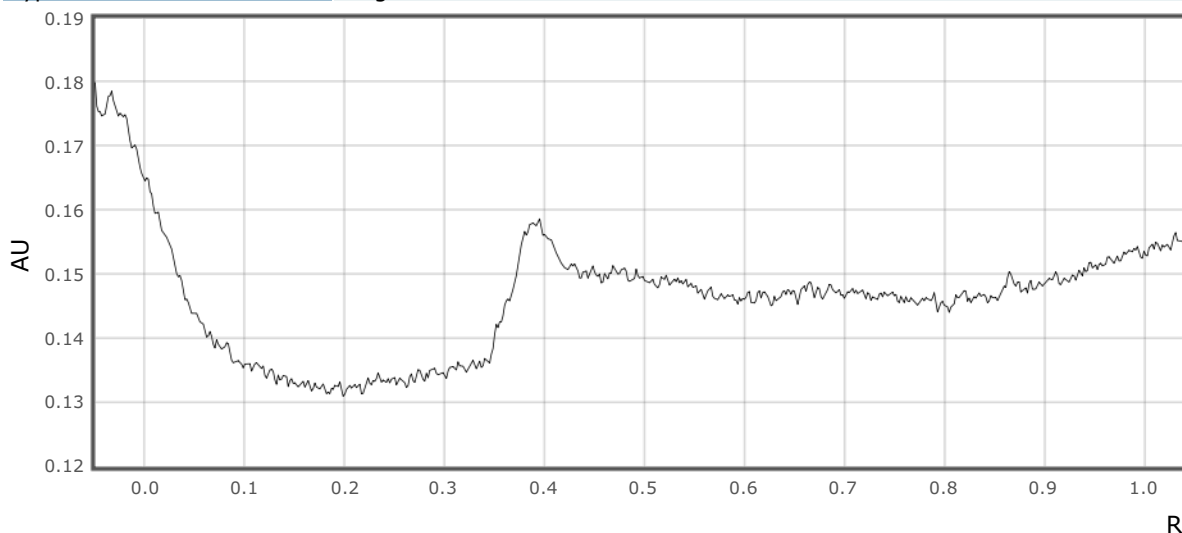
|          |                                     |
|----------|-------------------------------------|
| Executed | 06-Jun-2019 18:28:26 visionCATSuser |
|----------|-------------------------------------|

### Scan:

|            |        |
|------------|--------|
| Wavelength | 254 nm |
|------------|--------|

### Track 1:

|      |                  |
|------|------------------|
| Type | Single $\lambda$ |
|------|------------------|

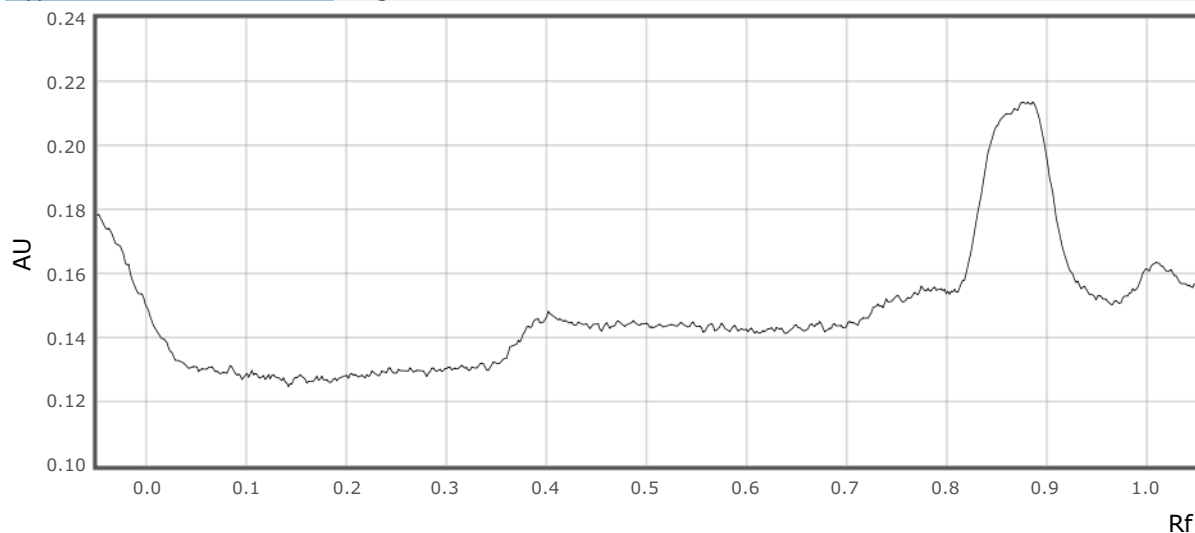


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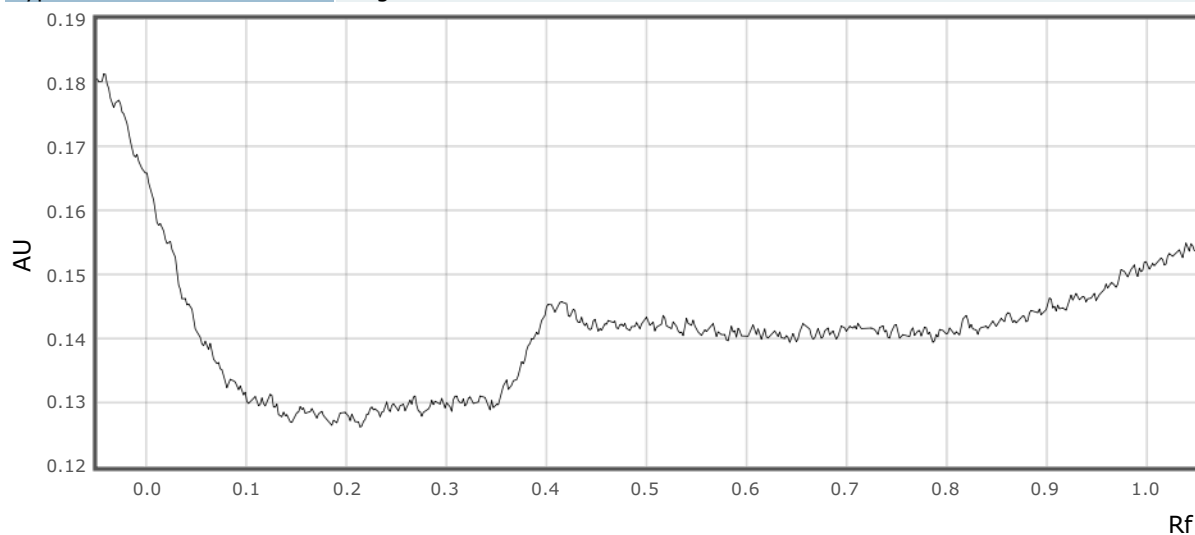
Track 2:

Type Single  $\lambda$



Track 3:

Type Single  $\lambda$

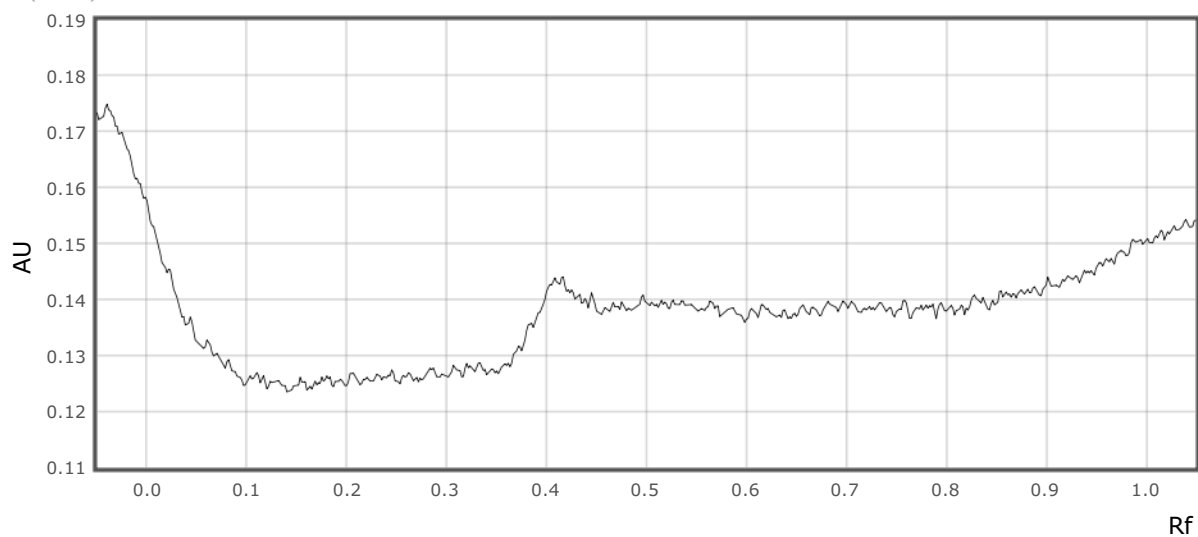


Track 4:

Type Single  $\lambda$

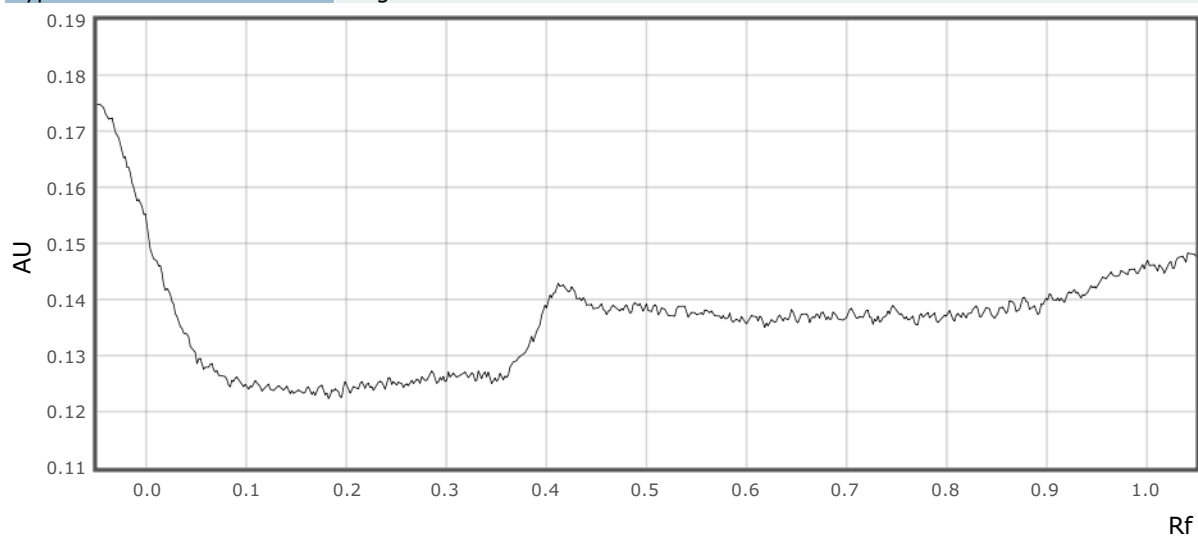
HA(75:25)re-1

visionCATS



Track 5:

Type Single  $\lambda$

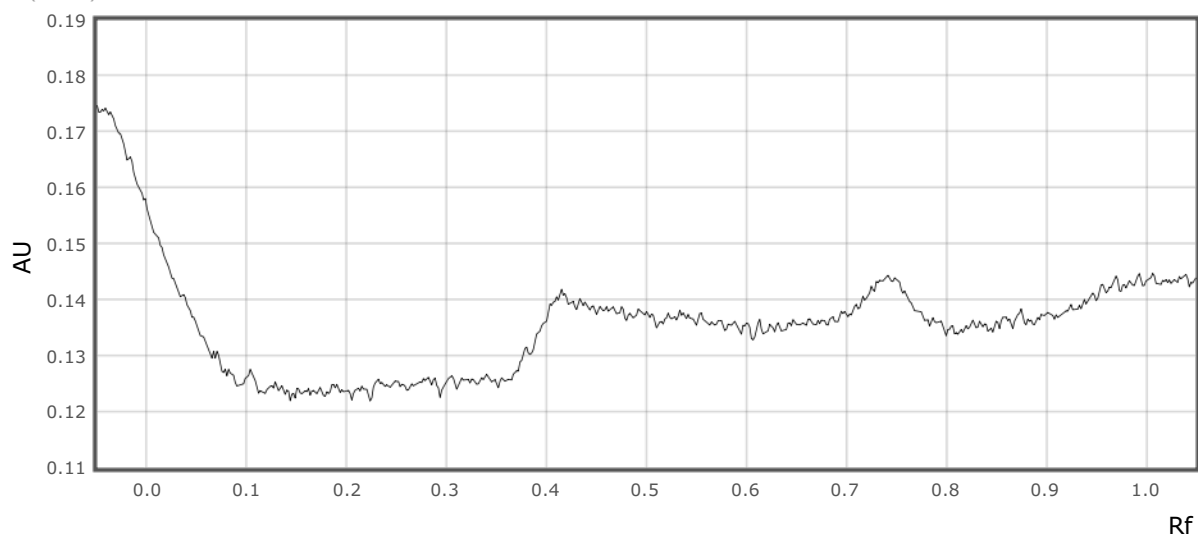


Track 6:

Type Single  $\lambda$

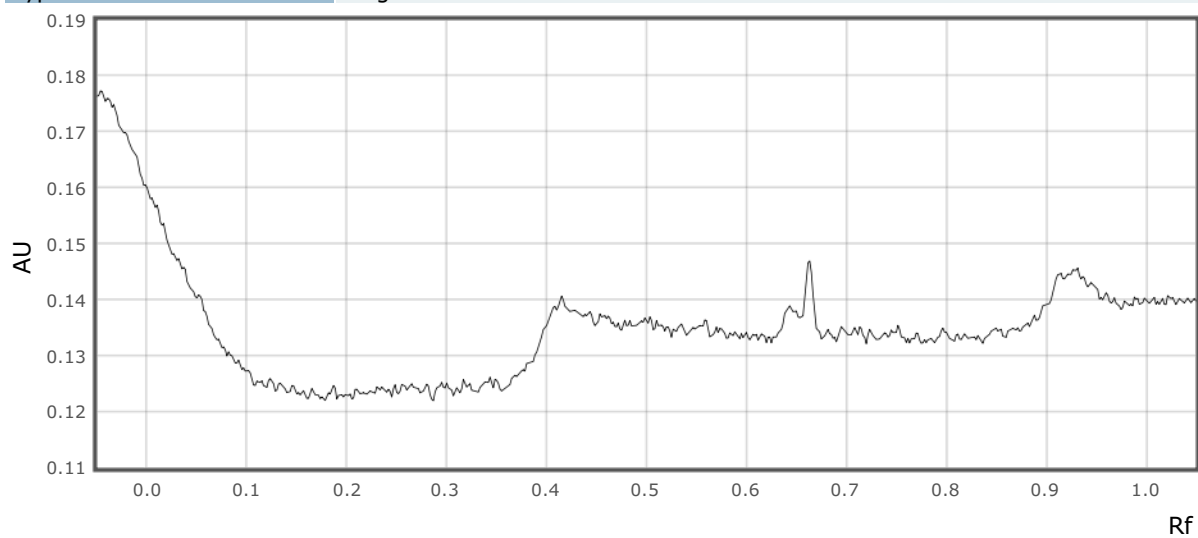
HA(75:25)re-1

visionCATS



Track 7:

Type Single  $\lambda$

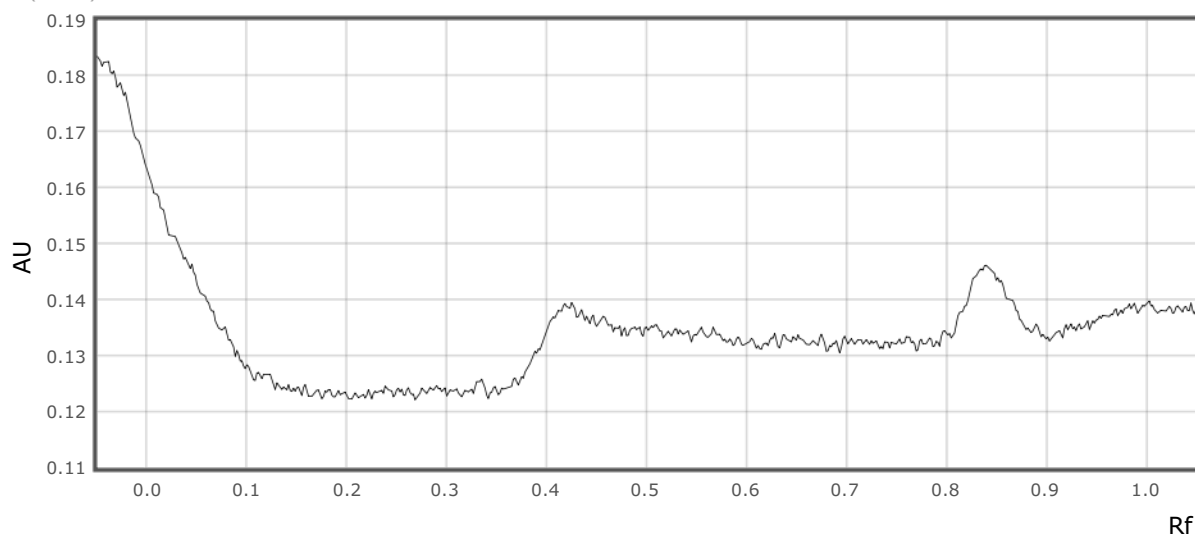


Track 8:

Type Single  $\lambda$

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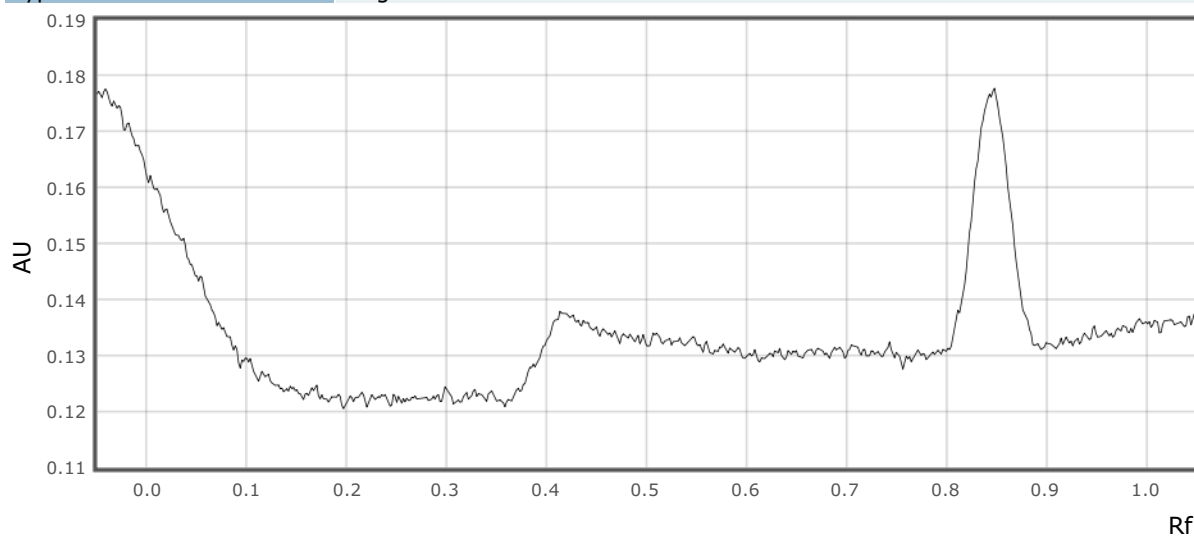
visionCATS



Track 9:

Type

Single  $\lambda$



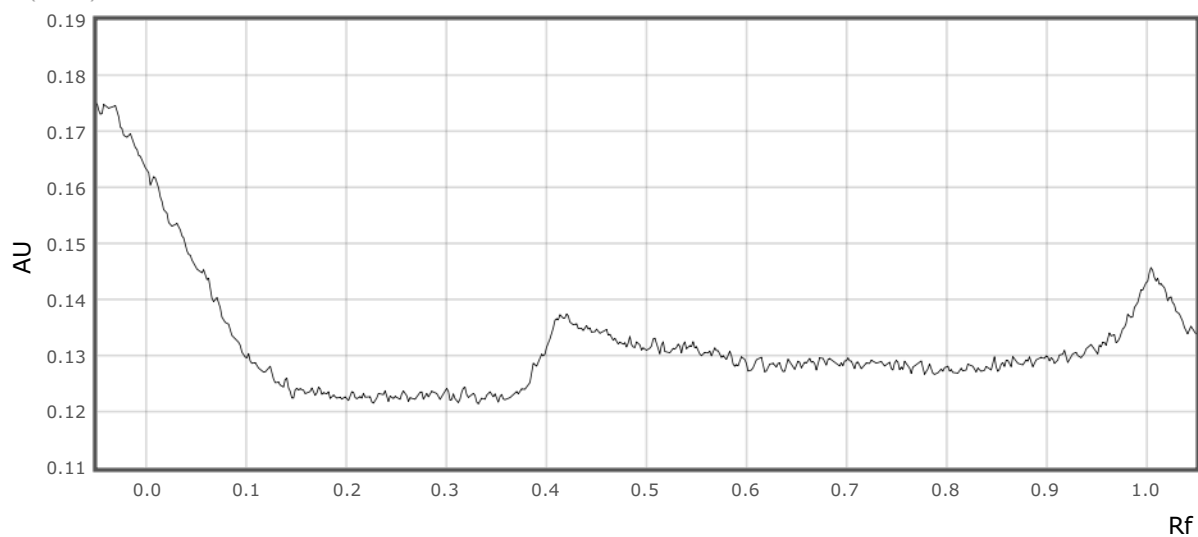
Track 10:

Type

Single  $\lambda$

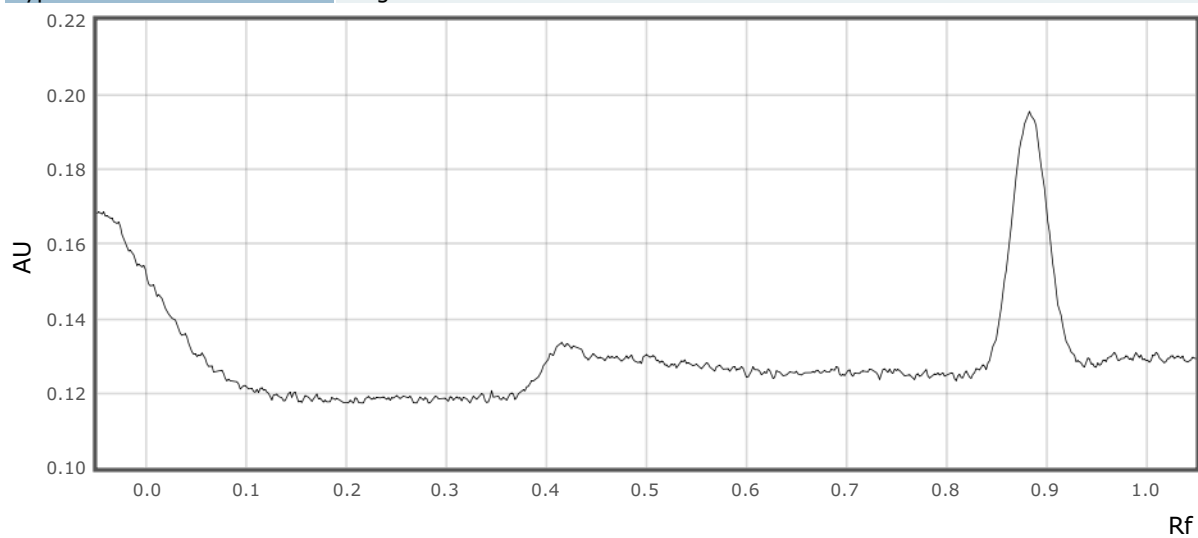
HA(75:25)re-1

visionCATS



Track 11:

Type Single  $\lambda$

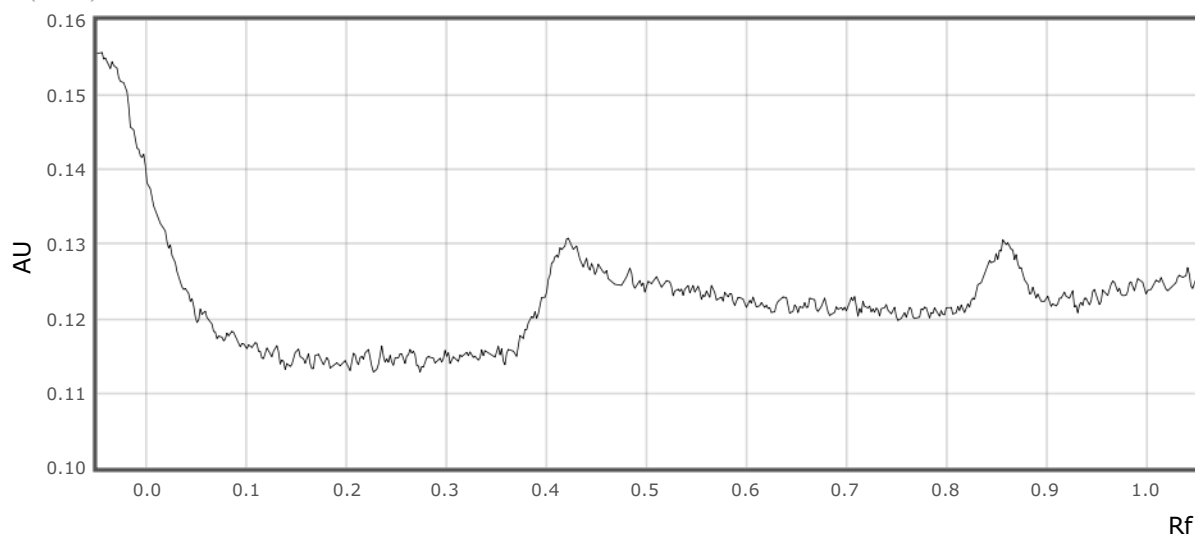


Track 12:

Type Single  $\lambda$

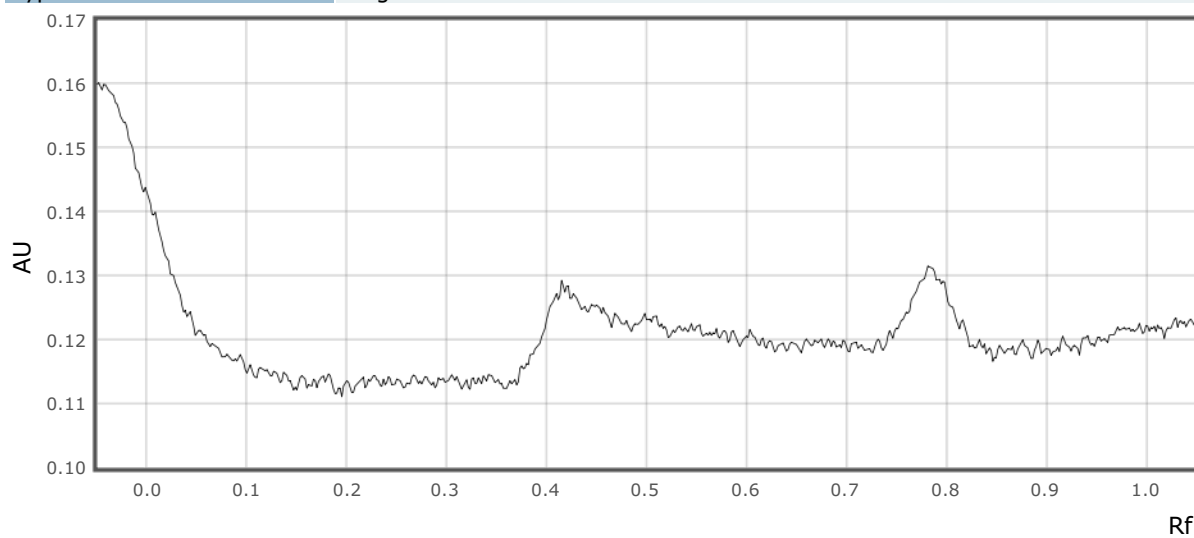
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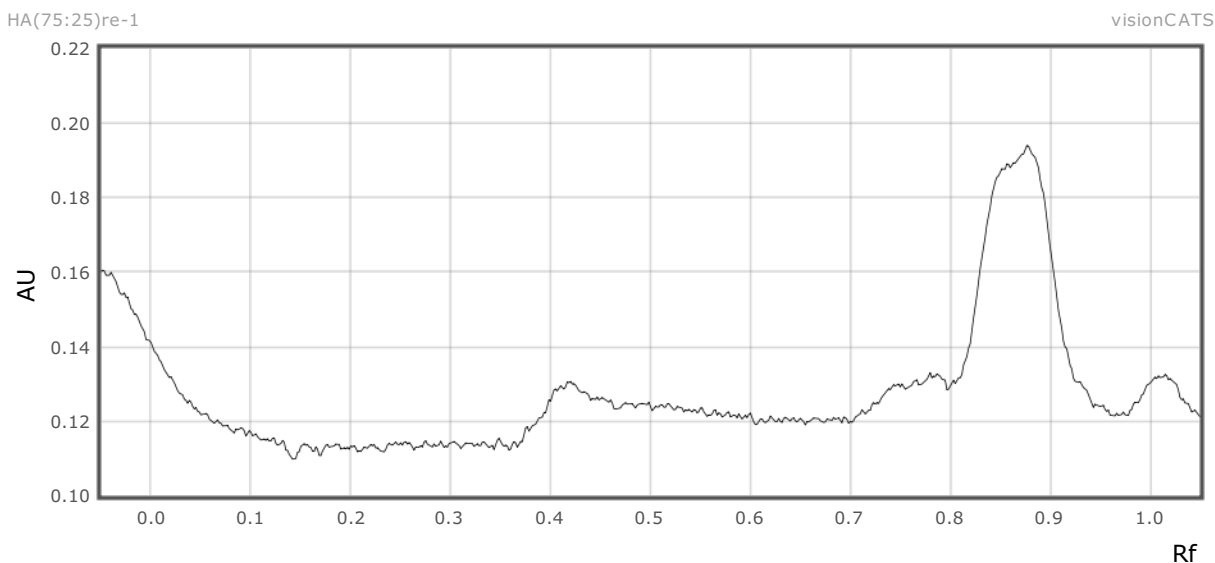
Track 13:

Type Single  $\lambda$



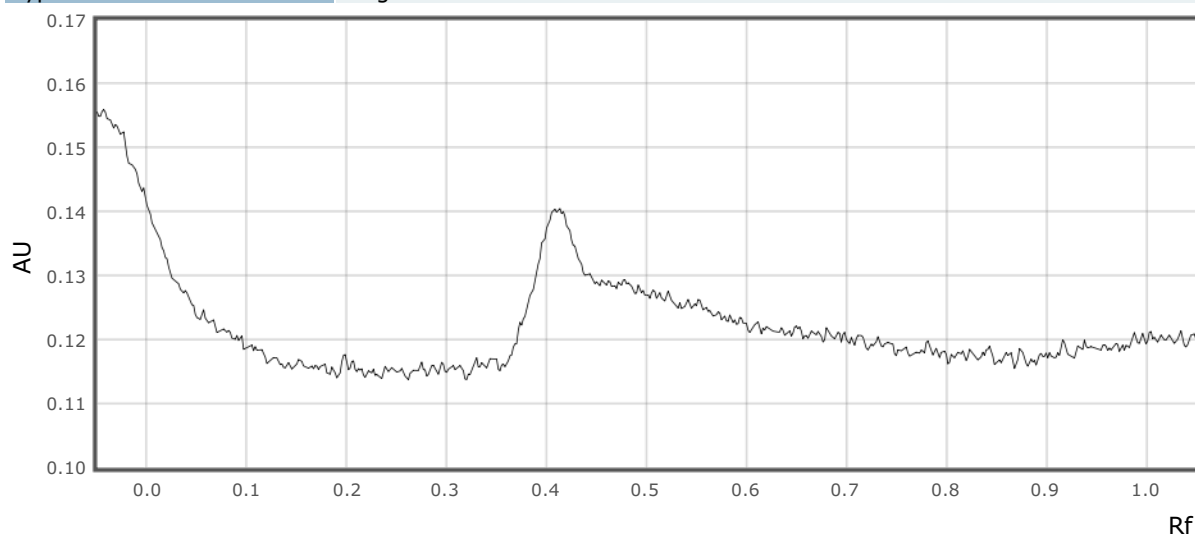
Track 14:

Type Single  $\lambda$



Track 15:

Type Single  $\lambda$



Derivatization 1 - dip:

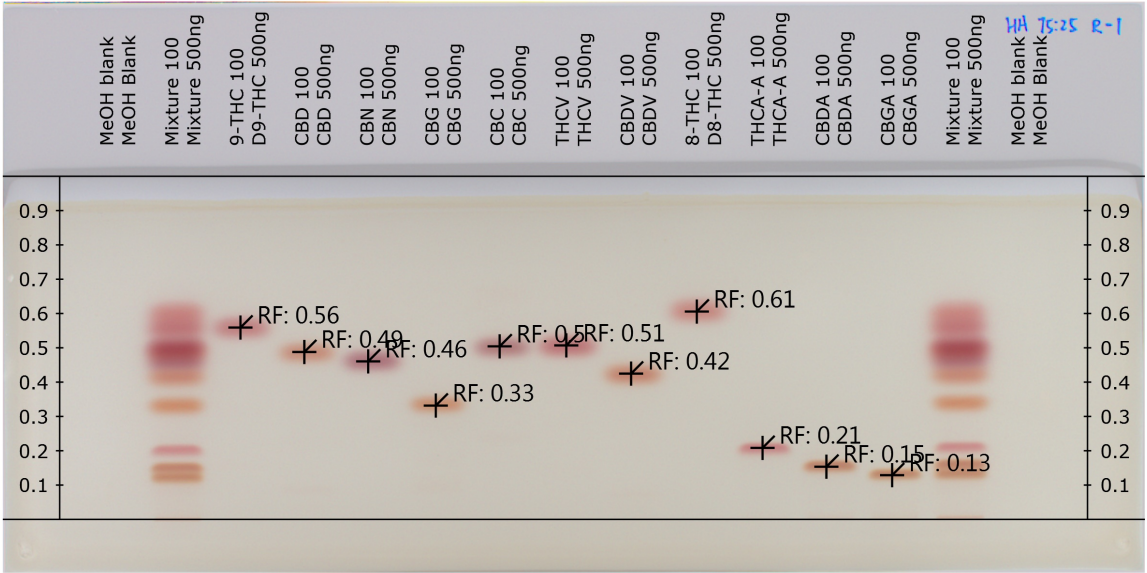
Executed 06-Jun-2019 18:30:35 visionCATSuser

Take image derivatized plate 1a - Visualizer (S/N: 230515):

Executed 06-Jun-2019 18:32:55 visionCATSuser

HA(75:25)re-1  
RT White

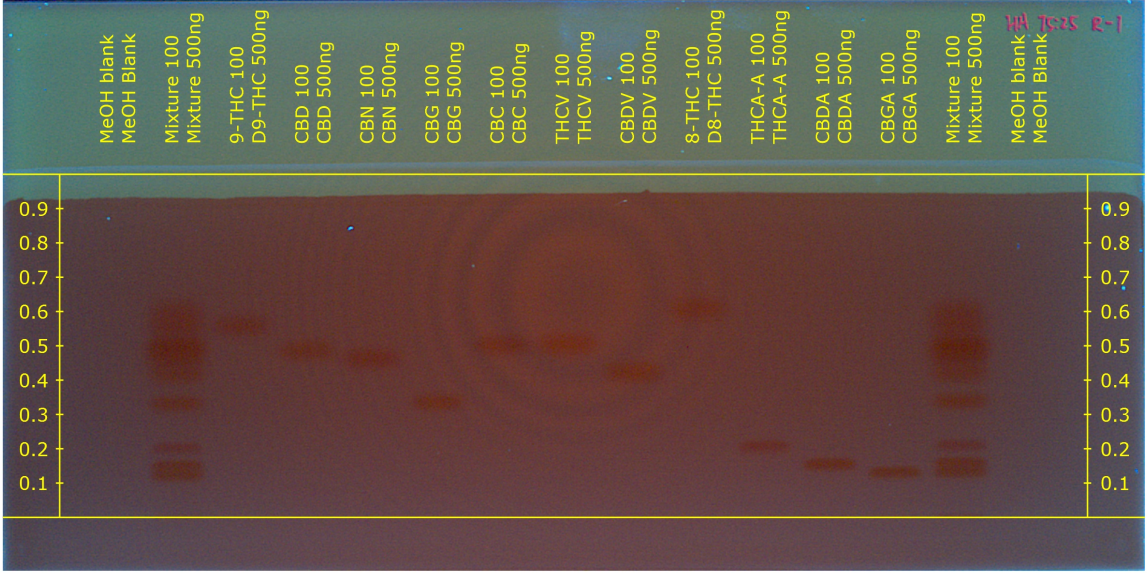
visionCATS  
Derivatized, RemTransVis



|                     |                  |
|---------------------|------------------|
| Exposure            | 0.066 s          |
| Contrast            | 1                |
| Normalized exposure | Disabled         |
| Clarify             | Disabled         |
| White balance       | 1.07, 1.03, 0.91 |

R 366

Derivatized, Remission366



|                     |                  |
|---------------------|------------------|
| Exposure            | 9.999 s          |
| Contrast            | 1                |
| Normalized exposure | Disabled         |
| Clarify             | Disabled         |
| White balance       | 1.00, 1.00, 1.00 |

Evaluation 1 :

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|                         |                                 |
|-------------------------|---------------------------------|
| Validated               | false                           |
| Step                    | Take image derivatized plate 1a |
| Concentration unit type | Mass / volume                   |
| Notes                   |                                 |

## Definition:

### References:

| 9-THC 100      |               |          |
|----------------|---------------|----------|
| Substance Name | Concentration | Purity   |
| 9-THC          | 100.000 µg/ml | 100.00 % |

| CBD 100        |               |          |
|----------------|---------------|----------|
| Substance Name | Concentration | Purity   |
| CBD            | 100.000 µg/ml | 100.00 % |

| CBN 100        |               |          |
|----------------|---------------|----------|
| Substance Name | Concentration | Purity   |
| CBN            | 100.000 µg/ml | 100.00 % |

| CBG 100        |               |          |
|----------------|---------------|----------|
| Substance Name | Concentration | Purity   |
| CBG            | 100.000 µg/ml | 100.00 % |

| CBC 100        |               |          |
|----------------|---------------|----------|
| Substance Name | Concentration | Purity   |
| CBC            | 100.000 µg/ml | 100.00 % |

| THCV 100       |               |          |
|----------------|---------------|----------|
| Substance Name | Concentration | Purity   |
| THCV           | 100.000 µg/ml | 100.00 % |

| CBDV 100       |               |          |
|----------------|---------------|----------|
| Substance Name | Concentration | Purity   |
| CBDV           | 100.000 µg/ml | 100.00 % |

| 8-THC 100      |               |          |
|----------------|---------------|----------|
| Substance Name | Concentration | Purity   |
| 8-THC          | 100.000 µg/ml | 100.00 % |

| THCA-A 100     |               |          |
|----------------|---------------|----------|
| Substance Name | Concentration | Purity   |
| THCA-A         | 100.000 µg/ml | 100.00 % |

| CBDA 100       |               |          |
|----------------|---------------|----------|
| Substance Name | Concentration | Purity   |
| CBDA           | 100.000 µg/ml | 100.00 % |

| CBGA 100       |               |          |
|----------------|---------------|----------|
| Substance Name | Concentration | Purity   |
| CBGA           | 100.000 µg/ml | 100.00 % |

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## Samples:

| Vial ID     | Amount | Volume solution | Reference amount | Related to |
|-------------|--------|-----------------|------------------|------------|
| MeOH blank  |        | 0.00 ml         |                  |            |
| Mixture 100 |        | 0.00 ml         |                  |            |

## Integration parameters:

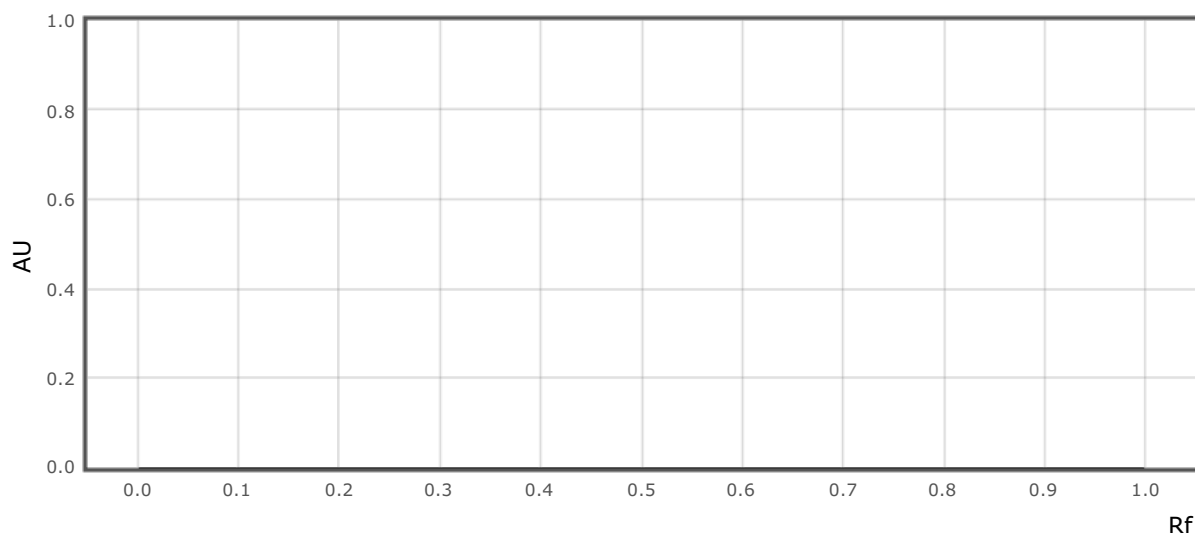
|                     |                                                                     |
|---------------------|---------------------------------------------------------------------|
| Bounds              | [0.000,1.000]                                                       |
| Smoothing           | Savitzky-Golay of order 3 and window 7                              |
| Baseline correction | Lowest slope with noise 0.05                                        |
| Profile subtraction | Profile subtraction from track 1                                    |
| Peaks detection     | Gauss (legacy) with sensitivity 0.1, separation 1 and threshold 0.1 |

## Scan:

|            |          |
|------------|----------|
| Wavelength | RT White |
|------------|----------|

## Track 1:

|             |            |
|-------------|------------|
| Type        | Sample     |
| Vial ID     | MeOH blank |
| Description | MeOH Blank |
| Volume      | 2.0 µl     |



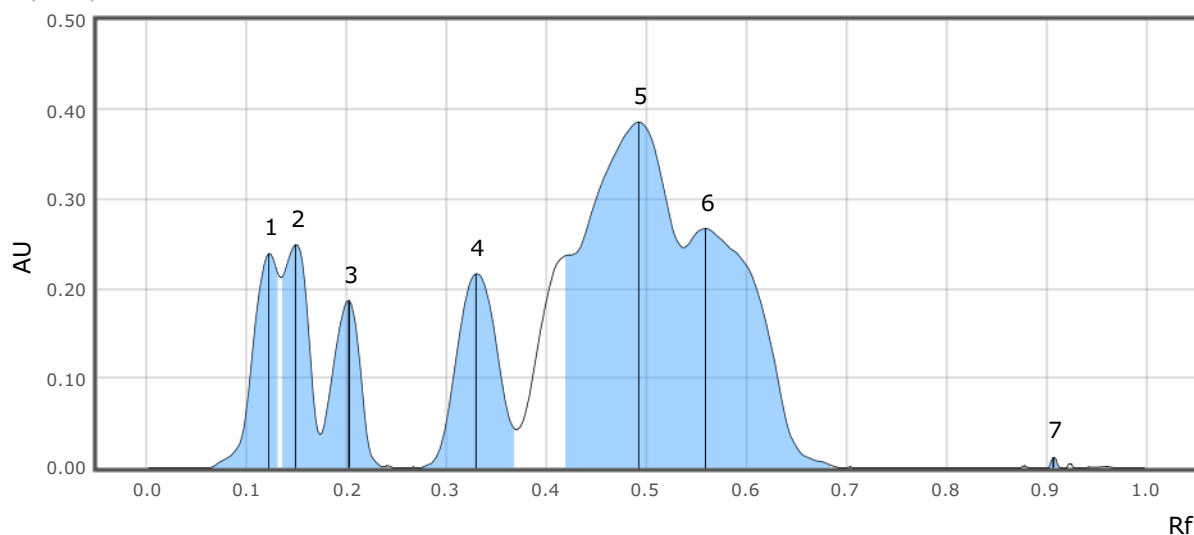
| Peak # | Start |   | Max |   |   | End |   | Area |   | Manual peak | Substance Name |
|--------|-------|---|-----|---|---|-----|---|------|---|-------------|----------------|
|        | Rf    | H | Rf  | H | % | Rf  | H | A    | % |             |                |

## Track 2:

|             |               |
|-------------|---------------|
| Type        | Sample        |
| Vial ID     | Mixture 100   |
| Description | Mixture 500ng |
| Volume      | 5.0 µl        |

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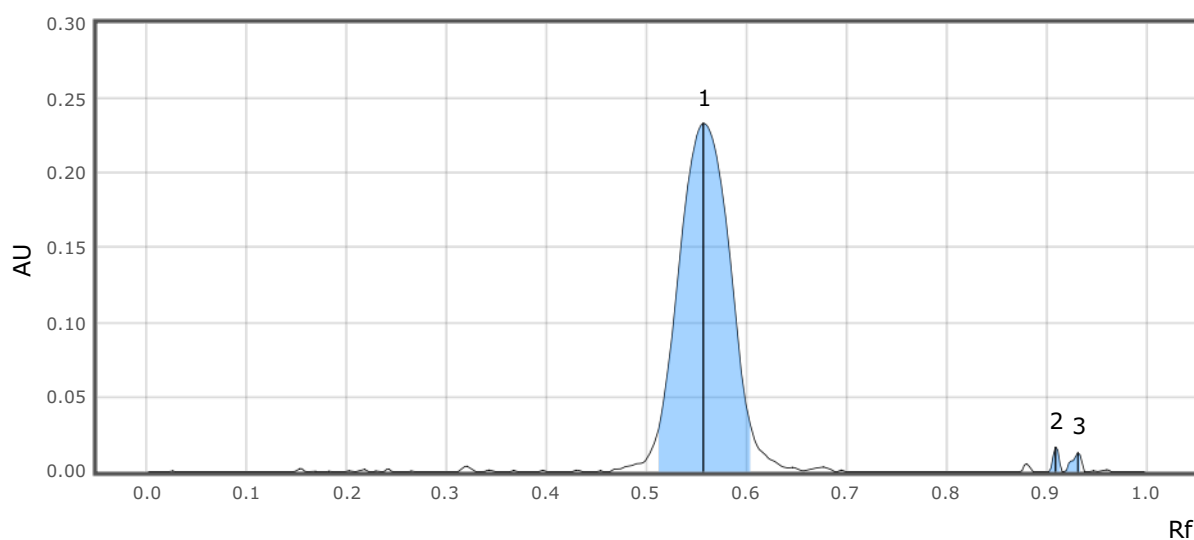
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| Peak # | Start |        | Max   |        |       | End   |        | Area    |       | Manual peak | Substance Name |
|--------|-------|--------|-------|--------|-------|-------|--------|---------|-------|-------------|----------------|
|        | Rf    | H      | Rf    | H      | %     | Rf    | H      | A       | %     |             |                |
| 1      | 0.062 | 0.0000 | 0.122 | 0.2393 | 15.37 | 0.133 | 0.2128 | 0.00693 | 7.70  | No          |                |
| 2      | 0.135 | 0.2126 | 0.149 | 0.2491 | 16.01 | 0.173 | 0.0370 | 0.00689 | 7.66  | No          |                |
| 3      | 0.173 | 0.0370 | 0.202 | 0.1868 | 12.00 | 0.236 | 0.0011 | 0.00584 | 6.49  | No          |                |
| 4      | 0.274 | 0.0000 | 0.329 | 0.2164 | 13.91 | 0.369 | 0.0426 | 0.01020 | 11.34 | No          |                |
| 5      | 0.419 | 0.2368 | 0.492 | 0.3861 | 24.80 | 0.537 | 0.2458 | 0.03727 | 41.43 | No          |                |
| 6      | 0.537 | 0.2458 | 0.559 | 0.2670 | 17.16 | 0.693 | 0.0000 | 0.02275 | 25.29 | No          |                |
| 7      | 0.903 | 0.0000 | 0.907 | 0.0117 | 0.75  | 0.914 | 0.0000 | 0.00007 | 0.08  | No          |                |

## Track 3:

|             |              |
|-------------|--------------|
| Type        | Reference    |
| Vial ID     | 9-THC 100    |
| Description | D9-THC 500ng |
| Volume      | 5.0 µl       |



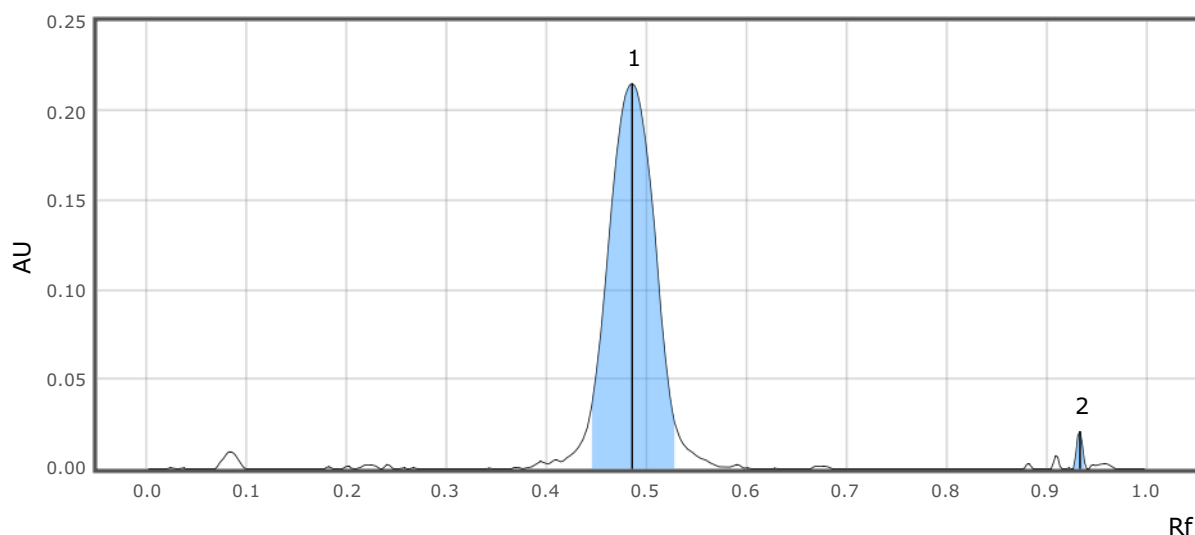
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| Peak # | Start |        | Max   |        |       | End   |        | Area    |       | Manual peak | Substance Name |
|--------|-------|--------|-------|--------|-------|-------|--------|---------|-------|-------------|----------------|
|        | Rf    | H      | Rf    | H      | %     | Rf    | H      | A       | %     |             |                |
| 1      | 0.512 | 0.0286 | 0.557 | 0.2330 | 88.88 | 0.604 | 0.0317 | 0.01341 | 98.21 | Yes         | 9-THC          |
| 2      | 0.903 | 0.0000 | 0.909 | 0.0165 | 6.28  | 0.916 | 0.0000 | 0.00011 | 0.80  | No          |                |
| 3      | 0.918 | 0.0000 | 0.932 | 0.0127 | 4.84  | 0.938 | 0.0000 | 0.00013 | 0.99  | No          |                |

## Track 4:

|             |           |
|-------------|-----------|
| Type        | Reference |
| Vial ID     | CBD 100   |
| Description | CBD 500ng |
| Volume      | 5.0 µl    |



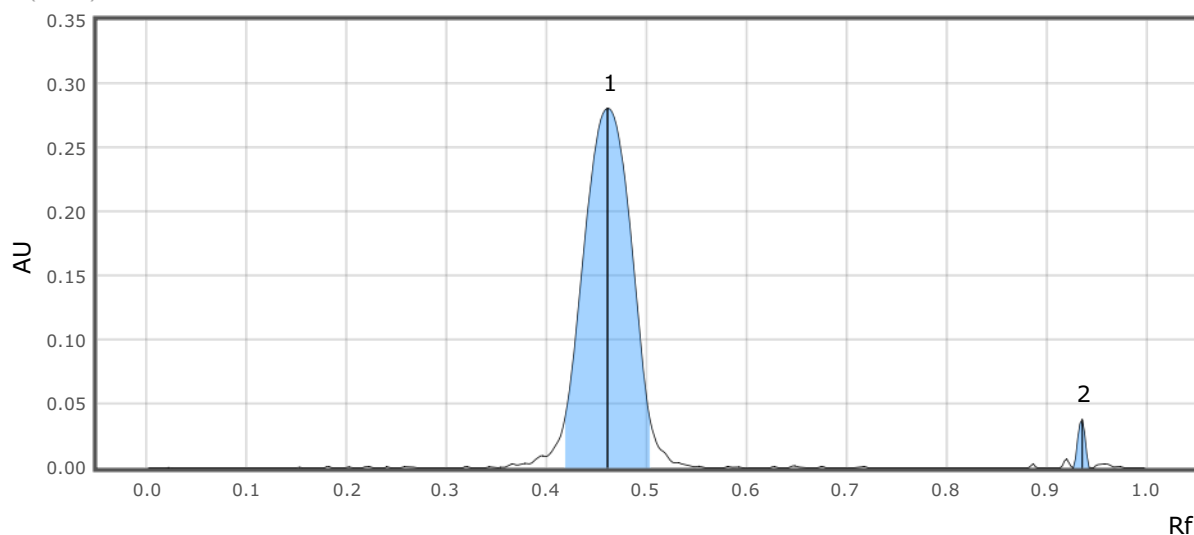
| Peak # | Start |        | Max   |        |       | End   |        | Area    |       | Manual peak | Substance Name |
|--------|-------|--------|-------|--------|-------|-------|--------|---------|-------|-------------|----------------|
|        | Rf    | H      | Rf    | H      | %     | Rf    | H      | A       | %     |             |                |
| 1      | 0.442 | 0.0232 | 0.485 | 0.2150 | 91.15 | 0.529 | 0.0261 | 0.01135 | 98.76 | Yes         | CBD            |
| 2      | 0.927 | 0.0000 | 0.934 | 0.0209 | 8.85  | 0.941 | 0.0000 | 0.00014 | 1.24  | No          |                |

## Track 5:

|             |           |
|-------------|-----------|
| Type        | Reference |
| Vial ID     | CBN 100   |
| Description | CBN 500ng |
| Volume      | 5.0 µl    |

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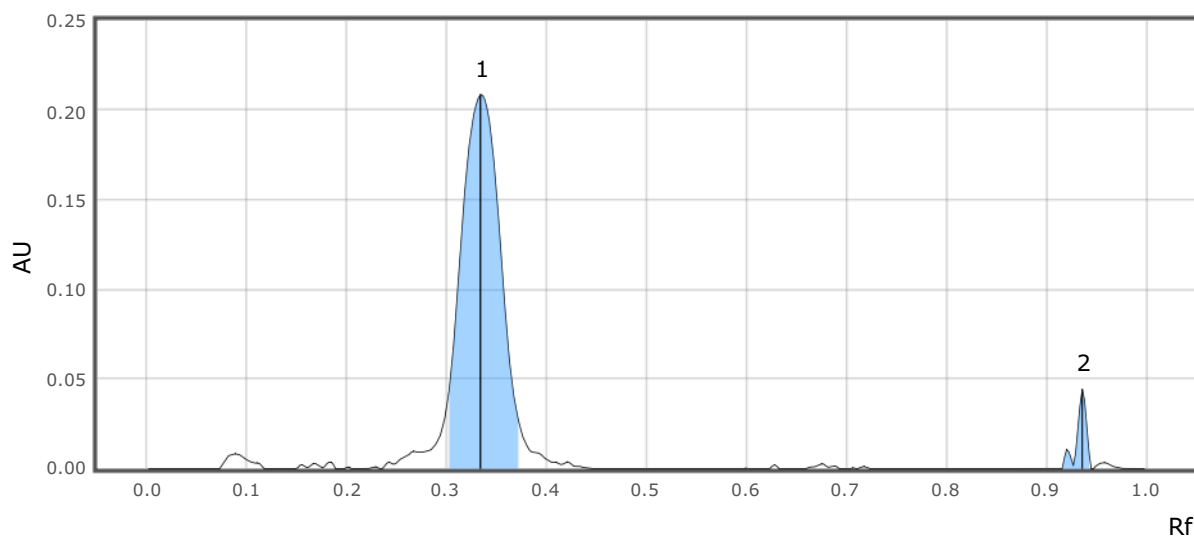
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| Peak # | Start |        | Max   |        |       | End   |        | Area    |       | Manual peak | Substance Name |
|--------|-------|--------|-------|--------|-------|-------|--------|---------|-------|-------------|----------------|
|        | Rf    | H      | Rf    | H      | %     | Rf    | H      | A       | %     |             |                |
| 1      | 0.418 | 0.0396 | 0.461 | 0.2810 | 88.13 | 0.505 | 0.0304 | 0.01542 | 97.99 | Yes         | CBN            |
| 2      | 0.927 | 0.0000 | 0.936 | 0.0378 | 11.87 | 0.945 | 0.0000 | 0.00032 | 2.01  | No          |                |

## Track 6:

|             |           |
|-------------|-----------|
| Type        | Reference |
| Vial ID     | CBG 100   |
| Description | CBG 500ng |
| Volume      | 5.0 µl    |



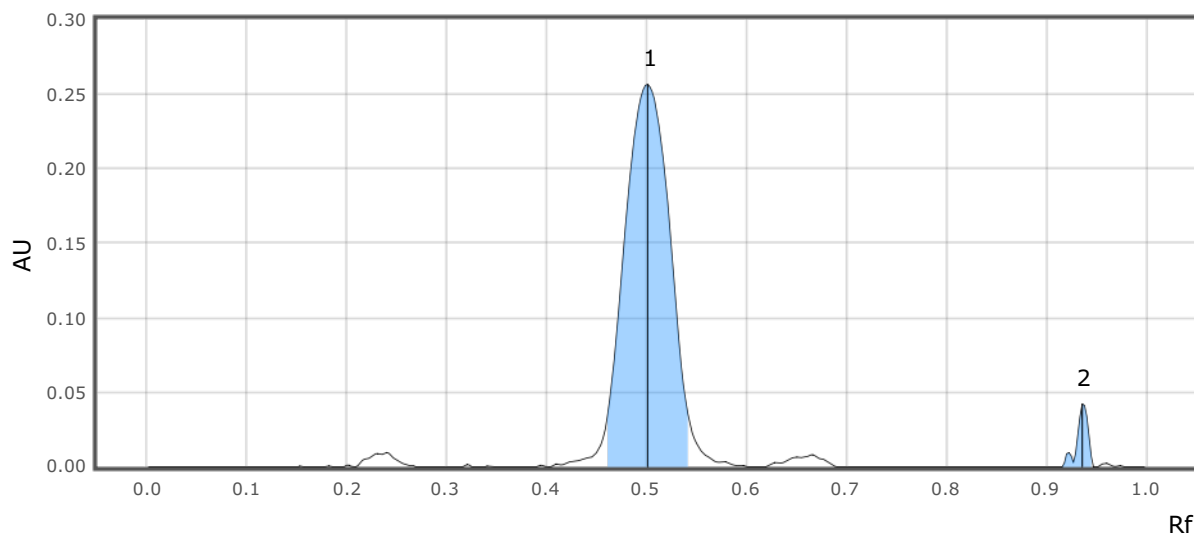
| Peak # | Start |        | Max   |        |       | End   |        | Area    |       | Manual peak | Substance Name |
|--------|-------|--------|-------|--------|-------|-------|--------|---------|-------|-------------|----------------|
|        | Rf    | H      | Rf    | H      | %     | Rf    | H      | A       | %     |             |                |
| 1      | 0.298 | 0.0281 | 0.334 | 0.2084 | 82.49 | 0.373 | 0.0270 | 0.00943 | 95.19 | Yes         | CBG            |
| 2      | 0.914 | 0.0000 | 0.936 | 0.0442 | 17.51 | 0.945 | 0.0000 | 0.00048 | 4.81  | No          |                |

## Track 7:

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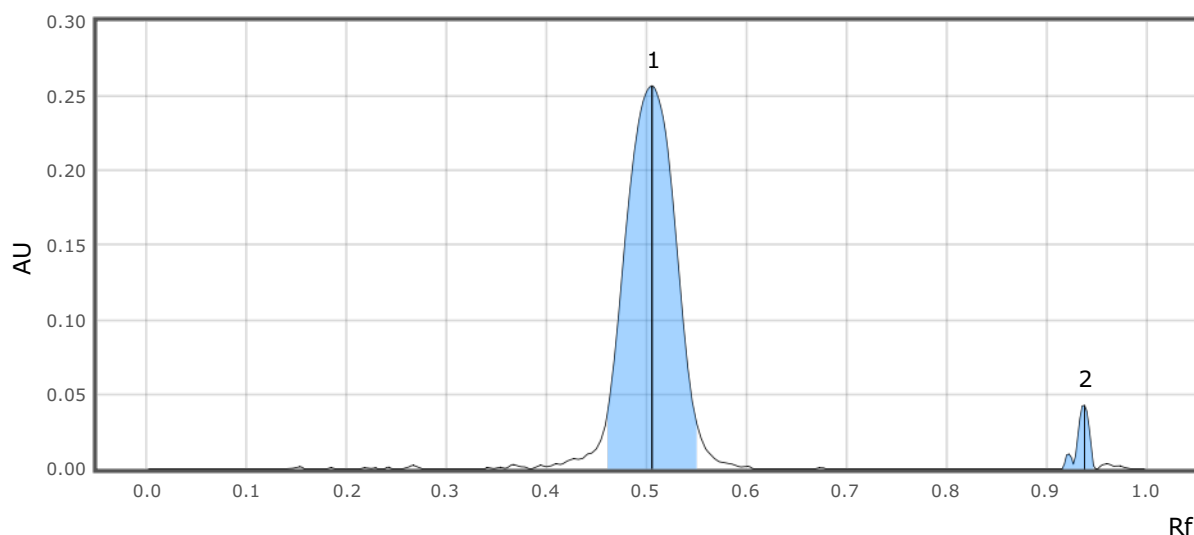
|             |           |
|-------------|-----------|
| Type        | Reference |
| Vial ID     | CBC 100   |
| Description | CBC 500ng |
| Volume      | 5.0 µl    |



| Peak # | Start |        | Max   |        |       | End   |        | Area    |       | Manual peak | Substance Name |
|--------|-------|--------|-------|--------|-------|-------|--------|---------|-------|-------------|----------------|
|        | Rf    | H      | Rf    | H      | %     | Rf    | H      | A       | %     |             |                |
| 1      | 0.461 | 0.0341 | 0.501 | 0.2563 | 85.87 | 0.545 | 0.0228 | 0.01329 | 96.13 | Yes         | CBC            |
| 2      | 0.916 | 0.0000 | 0.936 | 0.0422 | 14.13 | 0.947 | 0.0000 | 0.00054 | 3.87  | No          |                |

## Track 8:

|             |            |
|-------------|------------|
| Type        | Reference  |
| Vial ID     | THCV 100   |
| Description | THCV 500ng |
| Volume      | 5.0 µl     |



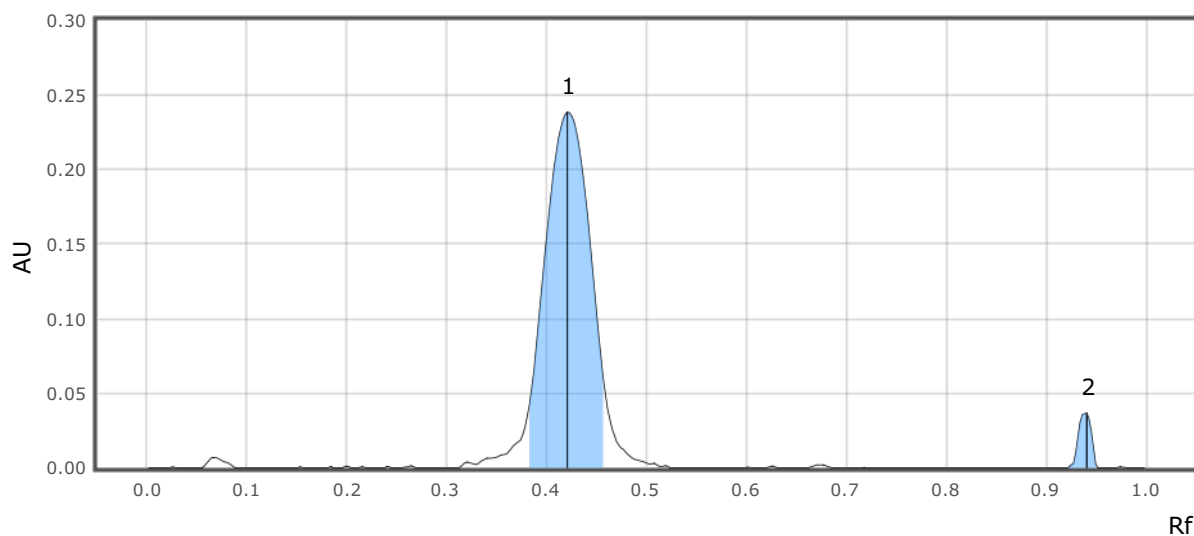
HA(75:25)re-1

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| Peak # | Start |        | Max   |        |       | End   |        | Area    |       | Manual peak | Substance Name |
|--------|-------|--------|-------|--------|-------|-------|--------|---------|-------|-------------|----------------|
|        | Rf    | H      | Rf    | H      | %     | Rf    | H      | A       | %     |             |                |
| 1      | 0.459 | 0.0289 | 0.506 | 0.2566 | 85.79 | 0.550 | 0.0304 | 0.01469 | 96.13 | Yes         | THCV           |
| 2      | 0.916 | 0.0000 | 0.938 | 0.0425 | 14.21 | 0.950 | 0.0000 | 0.00059 | 3.87  | No          |                |

## Track 9:

|             |            |
|-------------|------------|
| Type        | Reference  |
| Vial ID     | CBDV 100   |
| Description | CBDV 500ng |
| Volume      | 5.0 µl     |



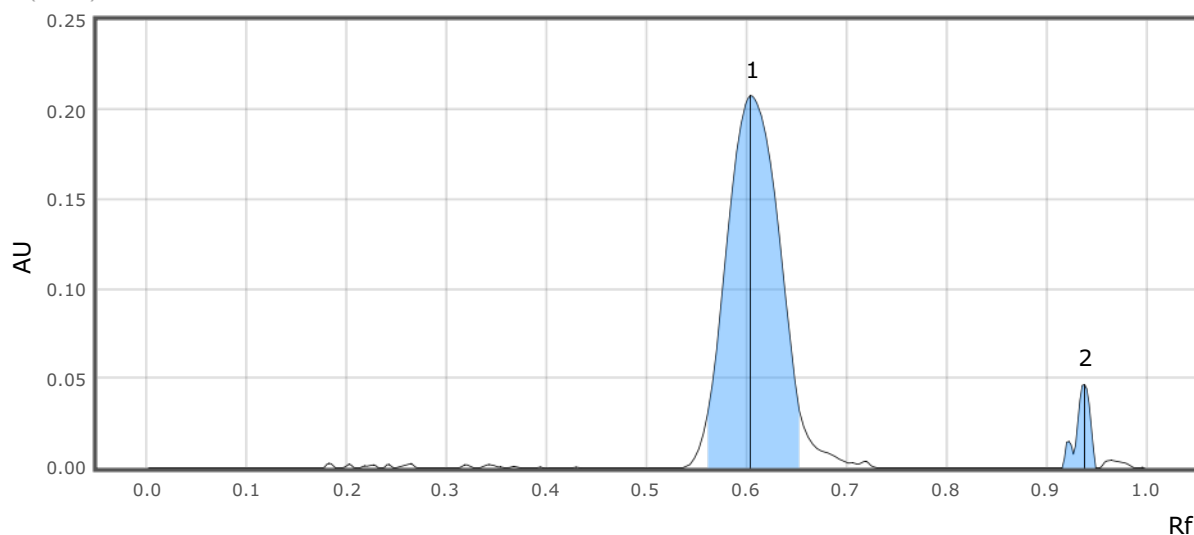
| Peak # | Start |        | Max   |        |       | End   |        | Area    |       | Manual peak | Substance Name |
|--------|-------|--------|-------|--------|-------|-------|--------|---------|-------|-------------|----------------|
|        | Rf    | H      | Rf    | H      | %     | Rf    | H      | A       | %     |             |                |
| 1      | 0.382 | 0.0346 | 0.421 | 0.2383 | 86.67 | 0.461 | 0.0396 | 0.01237 | 95.73 | Yes         | CBDV           |
| 2      | 0.921 | 0.0000 | 0.941 | 0.0366 | 13.33 | 0.952 | 0.0000 | 0.00055 | 4.27  | No          |                |

## Track 10:

|             |              |
|-------------|--------------|
| Type        | Reference    |
| Vial ID     | 8-THC 100    |
| Description | D8-THC 500ng |
| Volume      | 5.0 µl       |

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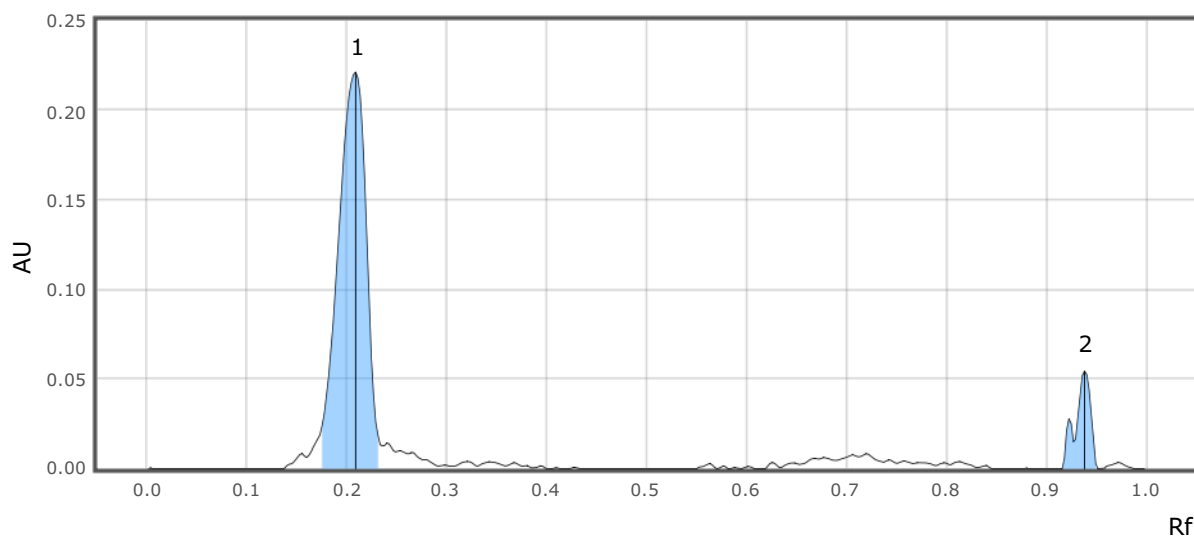
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| Peak # | Start |        | Max   |        |       | End   |        | Area    |       | Manual peak | Substance Name |
|--------|-------|--------|-------|--------|-------|-------|--------|---------|-------|-------------|----------------|
|        | Rf    | H      | Rf    | H      | %     | Rf    | H      | A       | %     |             |                |
| 1      | 0.558 | 0.0248 | 0.604 | 0.2077 | 81.70 | 0.656 | 0.0273 | 0.01249 | 94.32 | Yes         | 8-THC          |
| 2      | 0.916 | 0.0000 | 0.938 | 0.0465 | 18.30 | 0.952 | 0.0000 | 0.00075 | 5.68  | No          |                |

## Track 11:

|             |              |
|-------------|--------------|
| Type        | Reference    |
| Vial ID     | THCA-A 100   |
| Description | THCA-A 500ng |
| Volume      | 5.0 µl       |



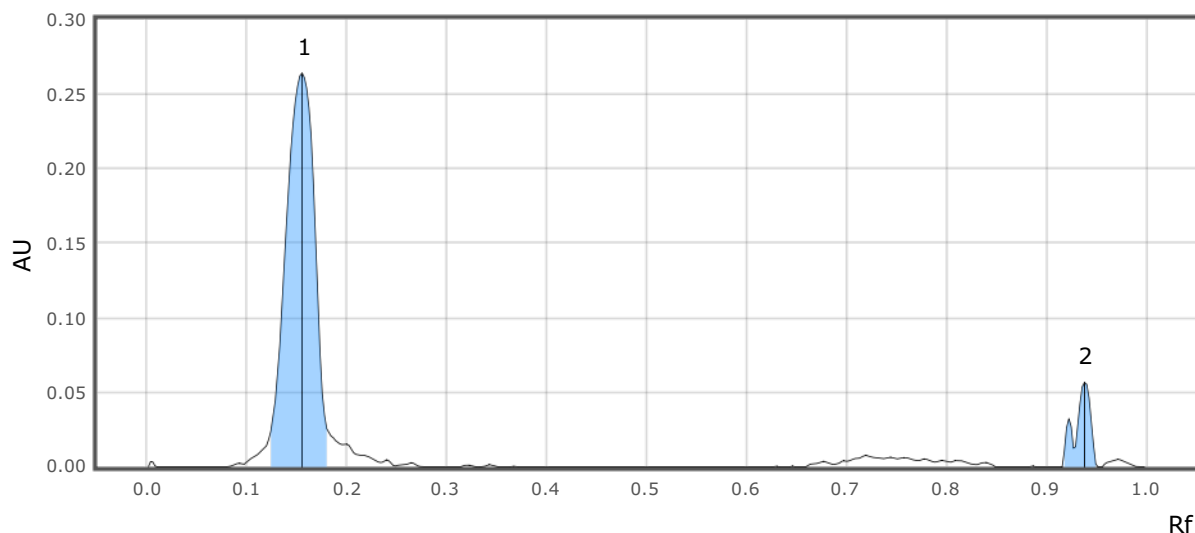
| Peak # | Start |        | Max   |        |       | End   |        | Area    |       | Manual peak | Substance Name |
|--------|-------|--------|-------|--------|-------|-------|--------|---------|-------|-------------|----------------|
|        | Rf    | H      | Rf    | H      | %     | Rf    | H      | A       | %     |             |                |
| 1      | 0.174 | 0.0240 | 0.209 | 0.2210 | 80.28 | 0.231 | 0.0187 | 0.00710 | 88.06 | Yes         | THCA-A         |
| 2      | 0.916 | 0.0000 | 0.938 | 0.0543 | 19.72 | 0.952 | 0.0000 | 0.00096 | 11.94 | No          |                |

## Track 12:

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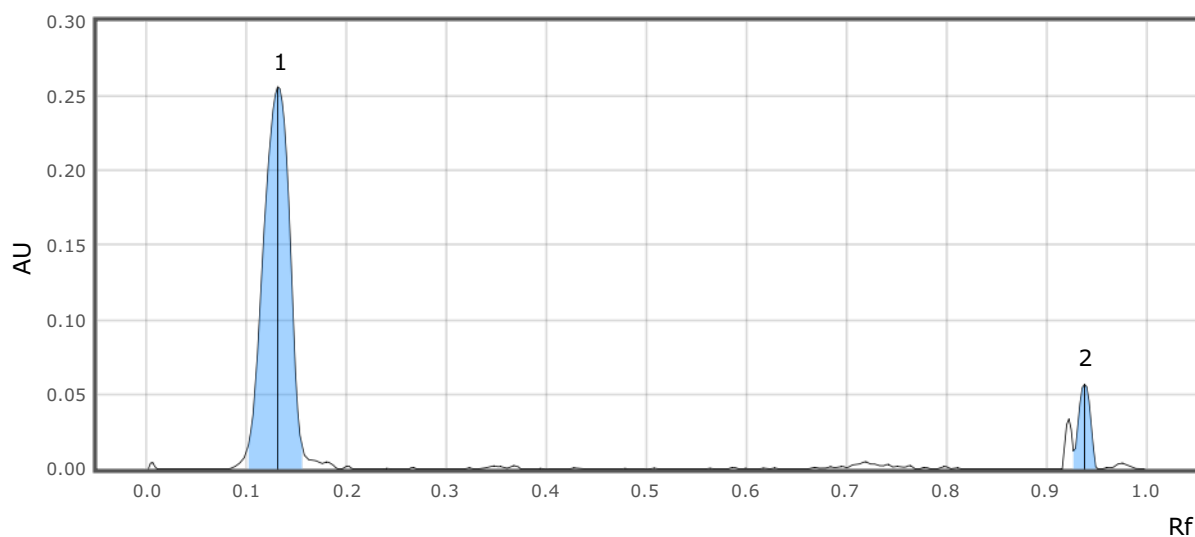
|             |            |
|-------------|------------|
| Type        | Reference  |
| Vial ID     | CBDA 100   |
| Description | CBDA 500ng |
| Volume      | 5.0 µl     |



| Peak # | Start |        | Max   |        |       | End   |        | Area    |       | Manual peak | Substance Name |
|--------|-------|--------|-------|--------|-------|-------|--------|---------|-------|-------------|----------------|
|        | Rf    | H      | Rf    | H      | %     | Rf    | H      | A       | %     |             |                |
| 1      | 0.124 | 0.0239 | 0.155 | 0.2637 | 82.36 | 0.181 | 0.0256 | 0.00870 | 89.74 | Yes         | CBDA           |
| 2      | 0.918 | 0.0109 | 0.938 | 0.0565 | 17.64 | 0.952 | 0.0000 | 0.00099 | 10.26 | No          |                |

Track 13:

|             |            |
|-------------|------------|
| Type        | Reference  |
| Vial ID     | CBGA 100   |
| Description | CBGA 500ng |
| Volume      | 5.0 µl     |



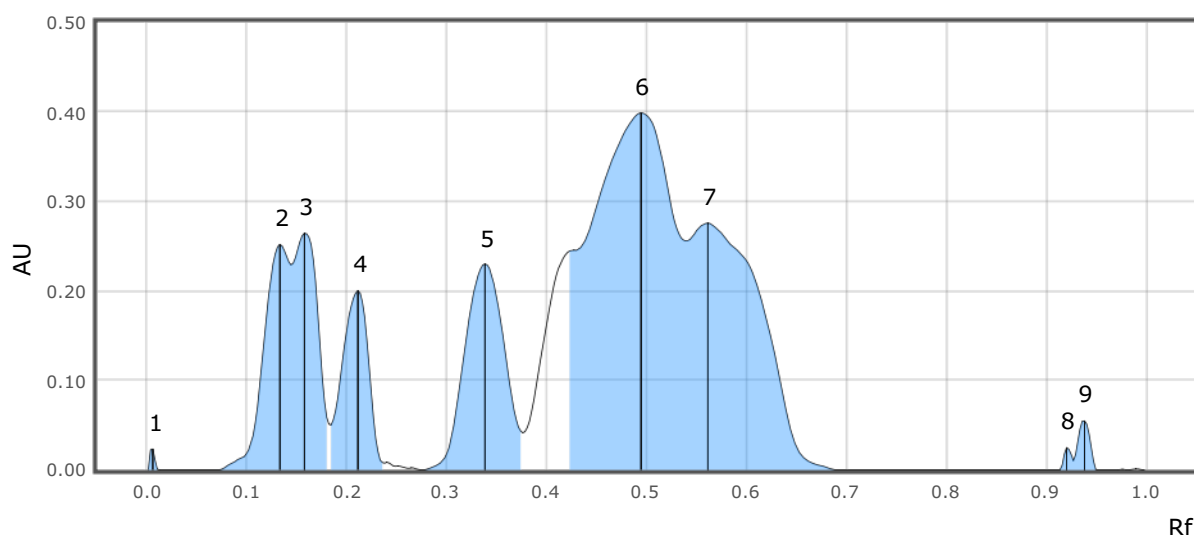
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| Peak # | Start |        | Max   |        |       | End   |        | Area    |       | Manual peak | Substance Name |
|--------|-------|--------|-------|--------|-------|-------|--------|---------|-------|-------------|----------------|
|        | Rf    | H      | Rf    | H      | %     | Rf    | H      | A       | %     |             |                |
| 1      | 0.101 | 0.0163 | 0.131 | 0.2559 | 81.90 | 0.157 | 0.0092 | 0.00774 | 90.87 | Yes         | CBGA           |
| 2      | 0.927 | 0.0119 | 0.938 | 0.0565 | 18.10 | 0.952 | 0.0000 | 0.00078 | 9.13  | No          |                |

## Track 14:

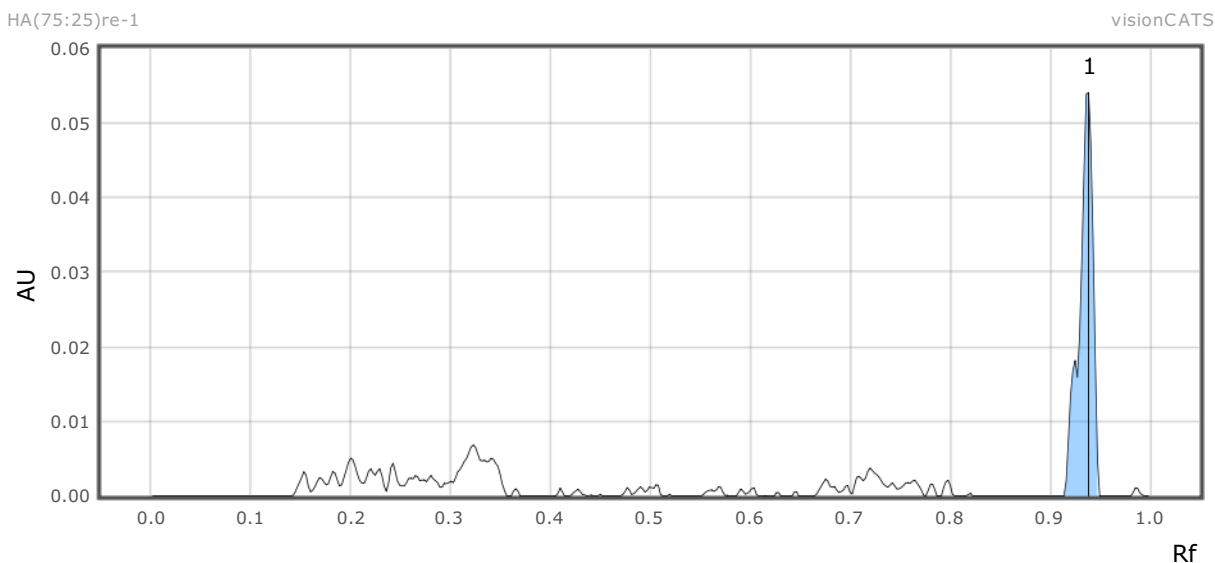
|             |               |
|-------------|---------------|
| Type        | Sample        |
| Vial ID     | Mixture 100   |
| Description | Mixture 500ng |
| Volume      | 5.0 µl        |



| Peak # | Start |        | Max   |        |       | End   |        | Area    |       | Manual peak | Substance Name |
|--------|-------|--------|-------|--------|-------|-------|--------|---------|-------|-------------|----------------|
|        | Rf    | H      | Rf    | H      | %     | Rf    | H      | A       | %     |             |                |
| 1      | 0.001 | 0.0000 | 0.006 | 0.0233 | 1.35  | 0.012 | 0.0000 | 0.00013 | 0.14  | No          |                |
| 2      | 0.070 | 0.0000 | 0.133 | 0.2516 | 14.61 | 0.144 | 0.2288 | 0.00738 | 7.90  | No          |                |
| 3      | 0.144 | 0.2288 | 0.158 | 0.2640 | 15.33 | 0.182 | 0.0512 | 0.00760 | 8.13  | No          |                |
| 4      | 0.184 | 0.0500 | 0.211 | 0.1999 | 11.61 | 0.238 | 0.0075 | 0.00606 | 6.48  | No          |                |
| 5      | 0.278 | 0.0000 | 0.338 | 0.2298 | 13.34 | 0.376 | 0.0413 | 0.01054 | 11.28 | No          |                |
| 6      | 0.423 | 0.2444 | 0.494 | 0.3985 | 23.14 | 0.539 | 0.2555 | 0.03775 | 40.39 | No          |                |
| 7      | 0.539 | 0.2555 | 0.561 | 0.2754 | 15.99 | 0.691 | 0.0000 | 0.02305 | 24.67 | No          |                |
| 8      | 0.914 | 0.0000 | 0.921 | 0.0248 | 1.44  | 0.927 | 0.0102 | 0.00021 | 0.22  | No          |                |
| 9      | 0.927 | 0.0102 | 0.938 | 0.0547 | 3.17  | 0.952 | 0.0000 | 0.00075 | 0.80  | No          |                |

## Track 15:

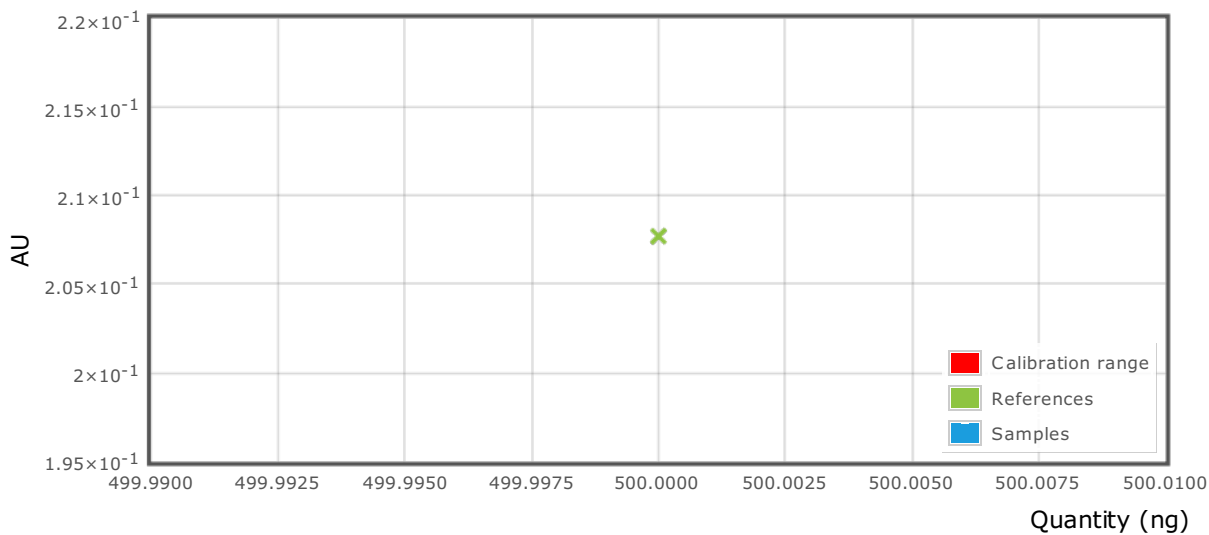
|             |            |
|-------------|------------|
| Type        | Sample     |
| Vial ID     | MeOH blank |
| Description | MeOH Blank |
| Volume      | 2.0 µl     |



| Peak # | Start |        | Max   |        |        | End   |        | Area    |        | Manual peak | Substance Name |
|--------|-------|--------|-------|--------|--------|-------|--------|---------|--------|-------------|----------------|
|        | Rf    | H      | Rf    | H      | %      | Rf    | H      | A       | %      |             |                |
| 1      | 0.914 | 0.0000 | 0.938 | 0.0540 | 100.00 | 0.950 | 0.0000 | 0.00085 | 100.00 | No          |                |

## Calibration results:

Height calibration for substance 8-THC @ RT White:

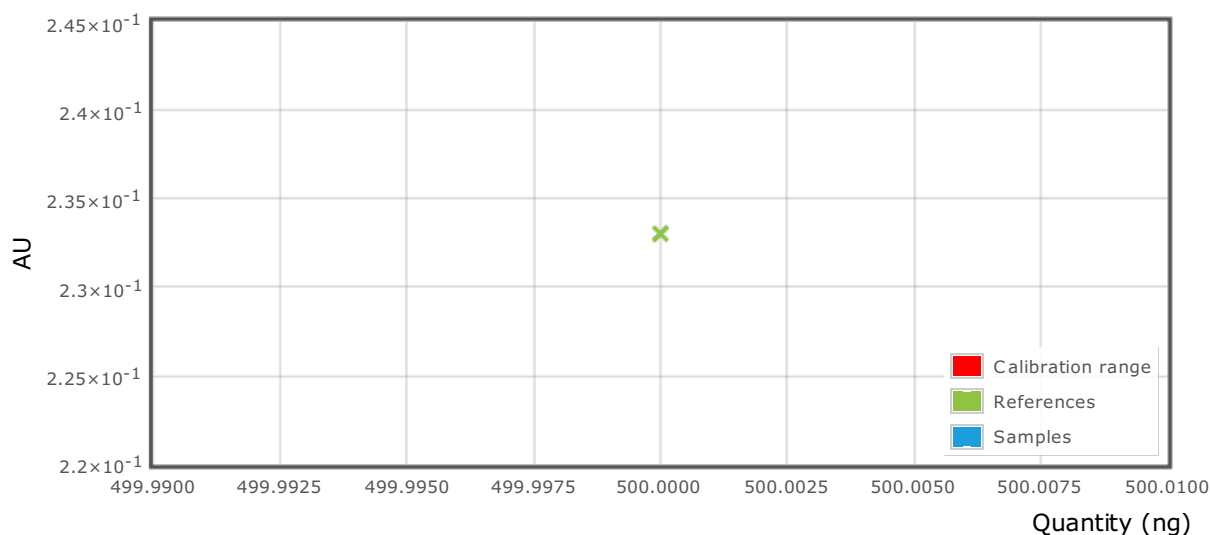


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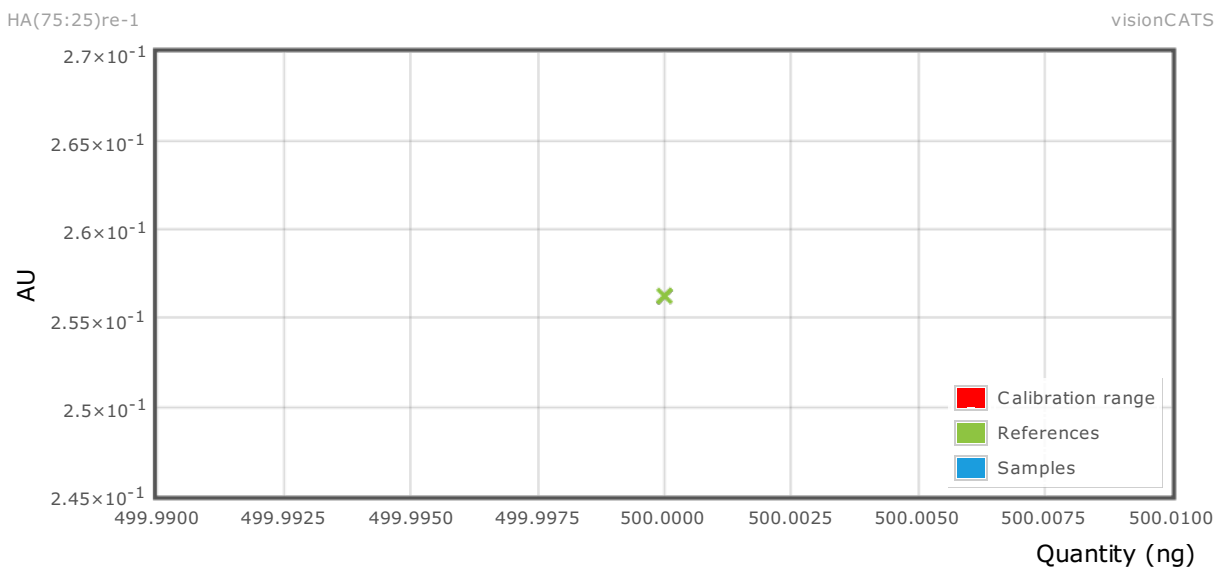
|                                                                                   |                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regression mode                                                                   | Linear-2                                                                                                                                                                                       |
| Range deviation                                                                   | 5.00 %                                                                                                                                                                                         |
| Related substances                                                                | Default                                                                                                                                                                                        |
| Number of references                                                              | 1                                                                                                                                                                                              |
| Calibration function                                                              | $y=0x$                                                                                                                                                                                         |
| Coefficient of variation                                                          | CV 0.00 %                                                                                                                                                                                      |
| Correlation coefficient                                                           | n/a                                                                                                                                                                                            |
|  | Unable to compute the results for this substance because there wasn't enough groups of references replicas (at least 1 for Linear-1, 2 for Linear2 and Mime-1 and 3 for Polynomial and MiMe-2) |

#### Height calibration for substance 9-THC @ RT White:



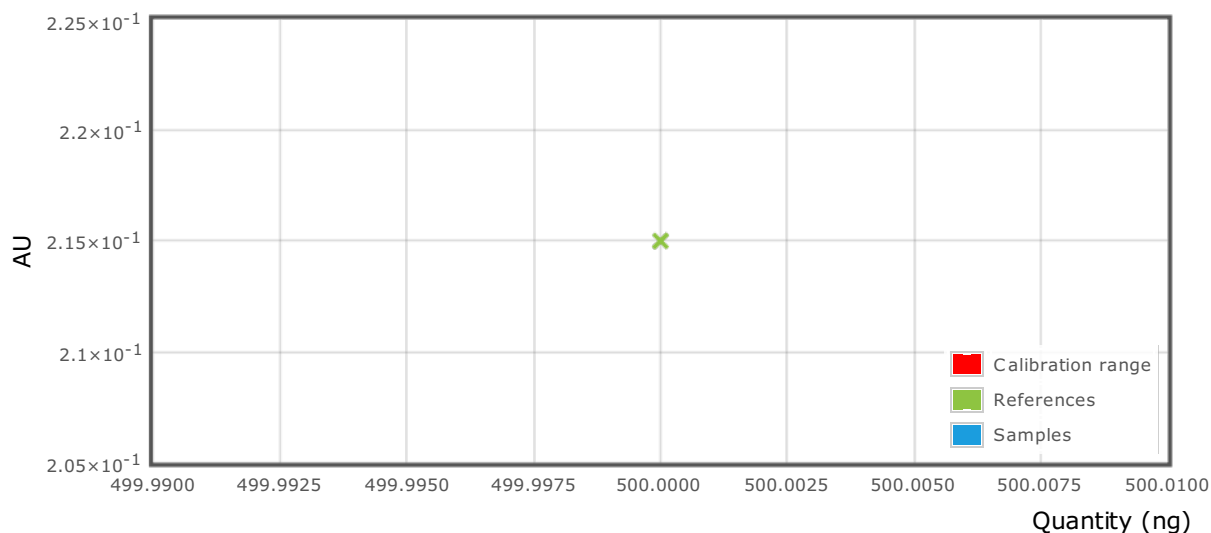
|                                                                                     |                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regression mode                                                                     | Linear-2                                                                                                                                                                                       |
| Range deviation                                                                     | 5.00 %                                                                                                                                                                                         |
| Related substances                                                                  | Default                                                                                                                                                                                        |
| Number of references                                                                | 1                                                                                                                                                                                              |
| Calibration function                                                                | $y=0x$                                                                                                                                                                                         |
| Coefficient of variation                                                            | CV 0.00 %                                                                                                                                                                                      |
| Correlation coefficient                                                             | n/a                                                                                                                                                                                            |
|  | Unable to compute the results for this substance because there wasn't enough groups of references replicas (at least 1 for Linear-1, 2 for Linear2 and Mime-1 and 3 for Polynomial and MiMe-2) |

#### Height calibration for substance CBC @ RT White:



|                                                                                     |                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regression mode                                                                     | Linear-2                                                                                                                                                                                       |
| Range deviation                                                                     | 5.00 %                                                                                                                                                                                         |
| Related substances                                                                  | Default                                                                                                                                                                                        |
| Number of references                                                                | 1                                                                                                                                                                                              |
| Calibration function                                                                | $y=0x$                                                                                                                                                                                         |
| Coefficient of variation                                                            | CV 0.00 %                                                                                                                                                                                      |
| Correlation coefficient                                                             | n/a                                                                                                                                                                                            |
|  | Unable to compute the results for this substance because there wasn't enough groups of references replicas (at least 1 for Linear-1, 2 for Linear2 and Mime-1 and 3 for Polynomial and MiMe-2) |

#### Height calibration for substance CBD @ RT White:

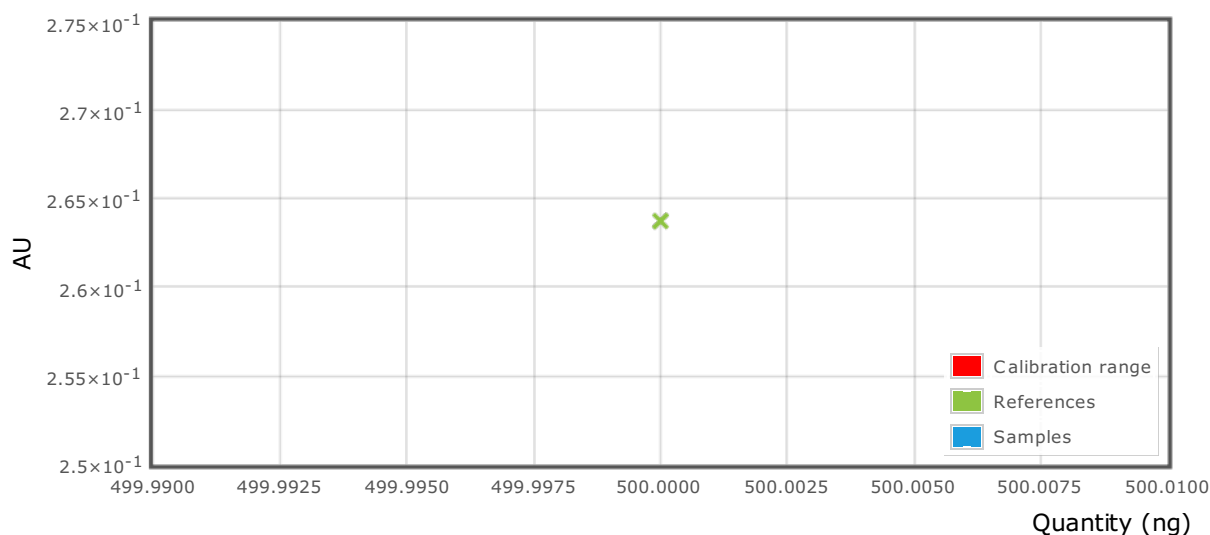


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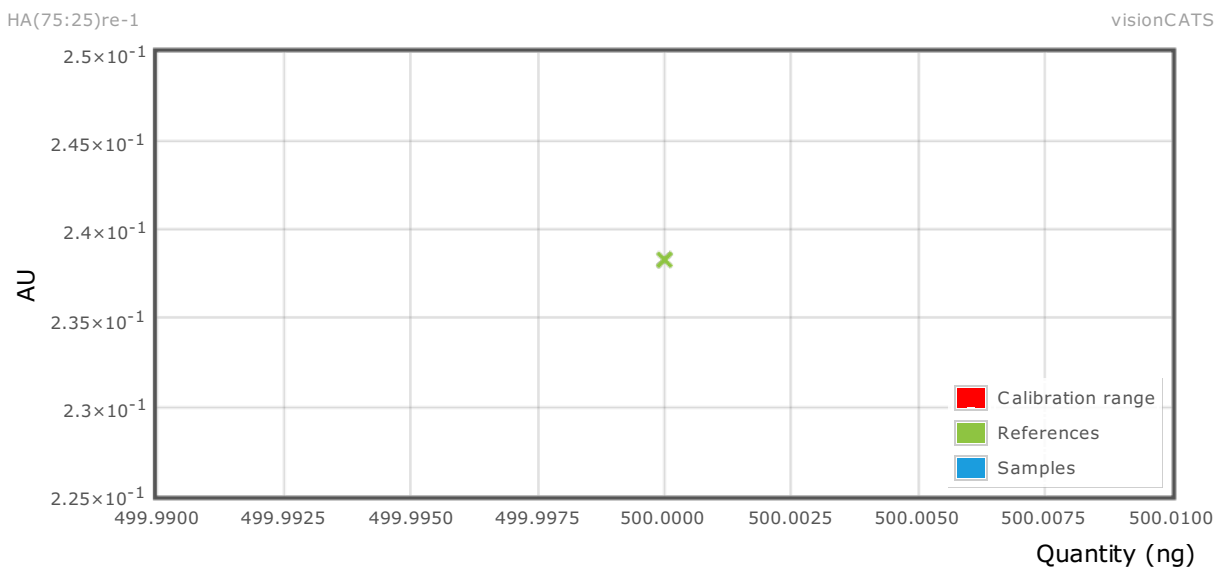
|                                                                                   |                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regression mode                                                                   | Linear-2                                                                                                                                                                                       |
| Range deviation                                                                   | 5.00 %                                                                                                                                                                                         |
| Related substances                                                                | Default                                                                                                                                                                                        |
| Number of references                                                              | 1                                                                                                                                                                                              |
| Calibration function                                                              | $y=0x$                                                                                                                                                                                         |
| Coefficient of variation                                                          | CV 0.00 %                                                                                                                                                                                      |
| Correlation coefficient                                                           | n/a                                                                                                                                                                                            |
|  | Unable to compute the results for this substance because there wasn't enough groups of references replicas (at least 1 for Linear-1, 2 for Linear2 and Mime-1 and 3 for Polynomial and MiMe-2) |

#### Height calibration for substance CBDA @ RT White:



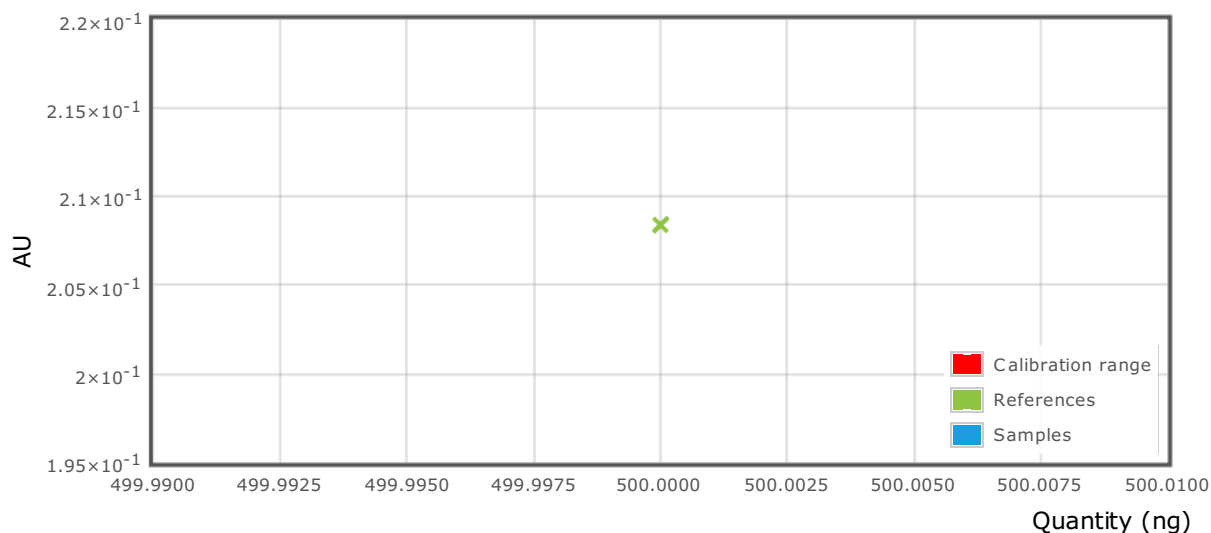
|                                                                                     |                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regression mode                                                                     | Linear-2                                                                                                                                                                                       |
| Range deviation                                                                     | 5.00 %                                                                                                                                                                                         |
| Related substances                                                                  | Default                                                                                                                                                                                        |
| Number of references                                                                | 1                                                                                                                                                                                              |
| Calibration function                                                                | $y=0x$                                                                                                                                                                                         |
| Coefficient of variation                                                            | CV 0.00 %                                                                                                                                                                                      |
| Correlation coefficient                                                             | n/a                                                                                                                                                                                            |
|  | Unable to compute the results for this substance because there wasn't enough groups of references replicas (at least 1 for Linear-1, 2 for Linear2 and Mime-1 and 3 for Polynomial and MiMe-2) |

#### Height calibration for substance CBDV @ RT White:



|                                                                                     |                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regression mode                                                                     | Linear-2                                                                                                                                                                                       |
| Range deviation                                                                     | 5.00 %                                                                                                                                                                                         |
| Related substances                                                                  | Default                                                                                                                                                                                        |
| Number of references                                                                | 1                                                                                                                                                                                              |
| Calibration function                                                                | $y=0x$                                                                                                                                                                                         |
| Coefficient of variation                                                            | CV 0.00 %                                                                                                                                                                                      |
| Correlation coefficient                                                             | n/a                                                                                                                                                                                            |
|  | Unable to compute the results for this substance because there wasn't enough groups of references replicas (at least 1 for Linear-1, 2 for Linear2 and Mime-1 and 3 for Polynomial and MiMe-2) |

#### Height calibration for substance CBG @ RT White:

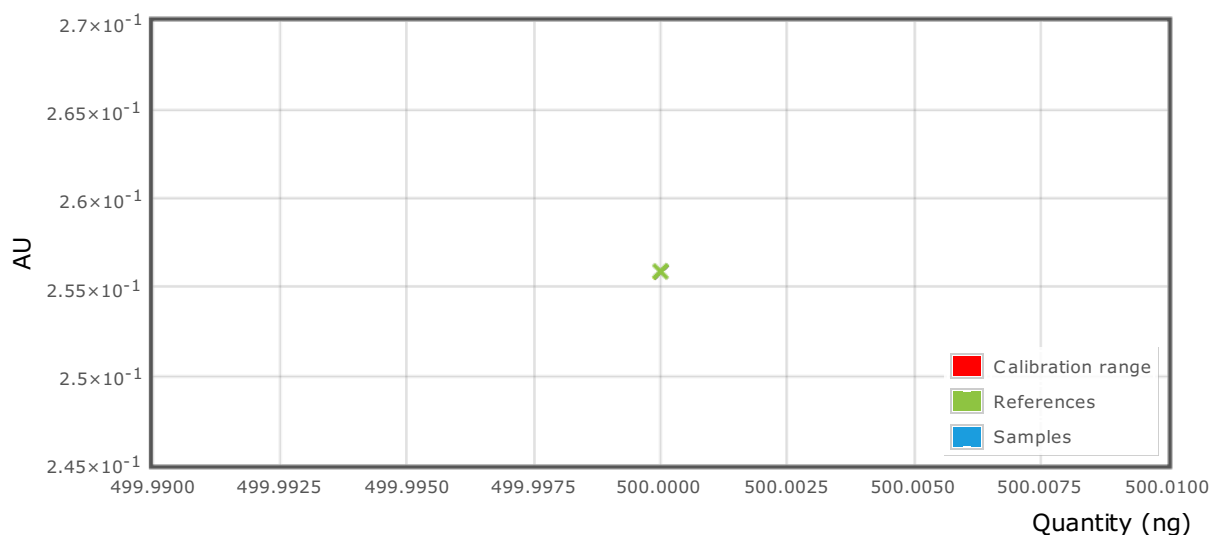


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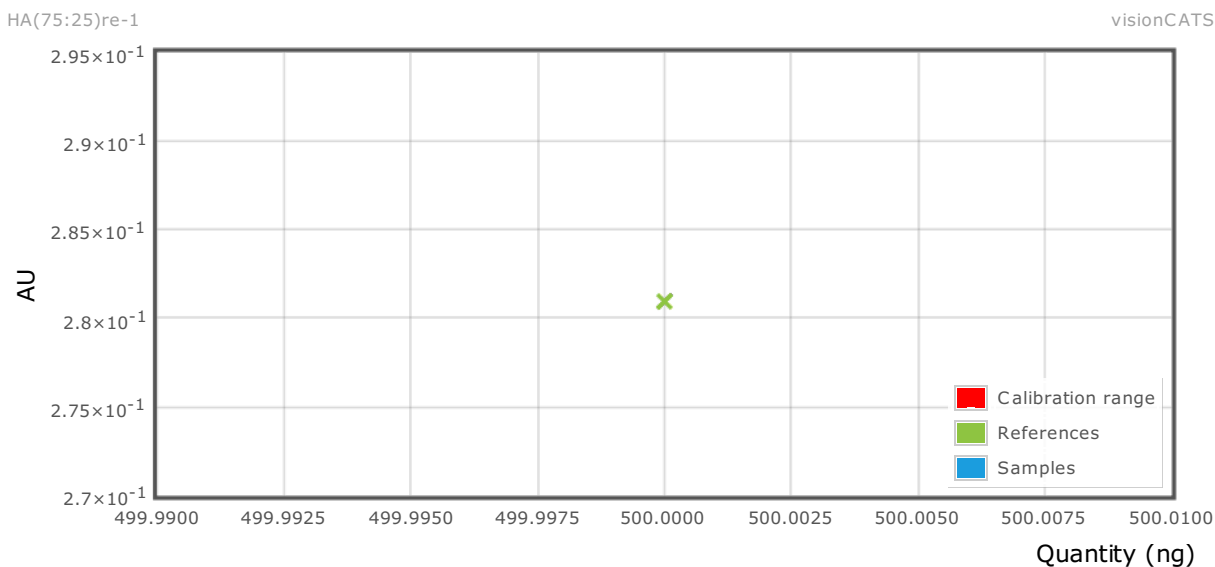
|                                                                                   |                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regression mode                                                                   | Linear-2                                                                                                                                                                                       |
| Range deviation                                                                   | 5.00 %                                                                                                                                                                                         |
| Related substances                                                                | Default                                                                                                                                                                                        |
| Number of references                                                              | 1                                                                                                                                                                                              |
| Calibration function                                                              | $y=0x$                                                                                                                                                                                         |
| Coefficient of variation                                                          | CV 0.00 %                                                                                                                                                                                      |
| Correlation coefficient                                                           | n/a                                                                                                                                                                                            |
|  | Unable to compute the results for this substance because there wasn't enough groups of references replicas (at least 1 for Linear-1, 2 for Linear2 and Mime-1 and 3 for Polynomial and MiMe-2) |

#### Height calibration for substance CBGA @ RT White:



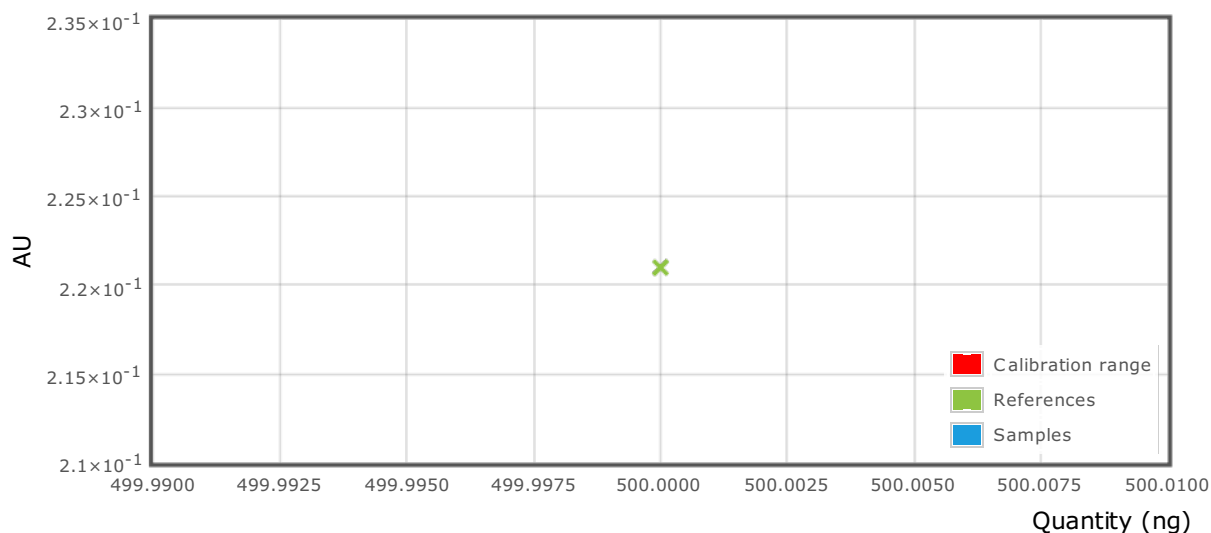
|                                                                                     |                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regression mode                                                                     | Linear-2                                                                                                                                                                                       |
| Range deviation                                                                     | 5.00 %                                                                                                                                                                                         |
| Related substances                                                                  | Default                                                                                                                                                                                        |
| Number of references                                                                | 1                                                                                                                                                                                              |
| Calibration function                                                                | $y=0x$                                                                                                                                                                                         |
| Coefficient of variation                                                            | CV 0.00 %                                                                                                                                                                                      |
| Correlation coefficient                                                             | n/a                                                                                                                                                                                            |
|  | Unable to compute the results for this substance because there wasn't enough groups of references replicas (at least 1 for Linear-1, 2 for Linear2 and Mime-1 and 3 for Polynomial and MiMe-2) |

#### Height calibration for substance CBN @ RT White:



|                                                                                     |                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regression mode                                                                     | Linear-2                                                                                                                                                                                       |
| Range deviation                                                                     | 5.00 %                                                                                                                                                                                         |
| Related substances                                                                  | Default                                                                                                                                                                                        |
| Number of references                                                                | 1                                                                                                                                                                                              |
| Calibration function                                                                | $y=0x$                                                                                                                                                                                         |
| Coefficient of variation                                                            | CV 0.00 %                                                                                                                                                                                      |
| Correlation coefficient                                                             | n/a                                                                                                                                                                                            |
|  | Unable to compute the results for this substance because there wasn't enough groups of references replicas (at least 1 for Linear-1, 2 for Linear2 and Mime-1 and 3 for Polynomial and MiMe-2) |

#### Height calibration for substance THCA-A @ RT White:

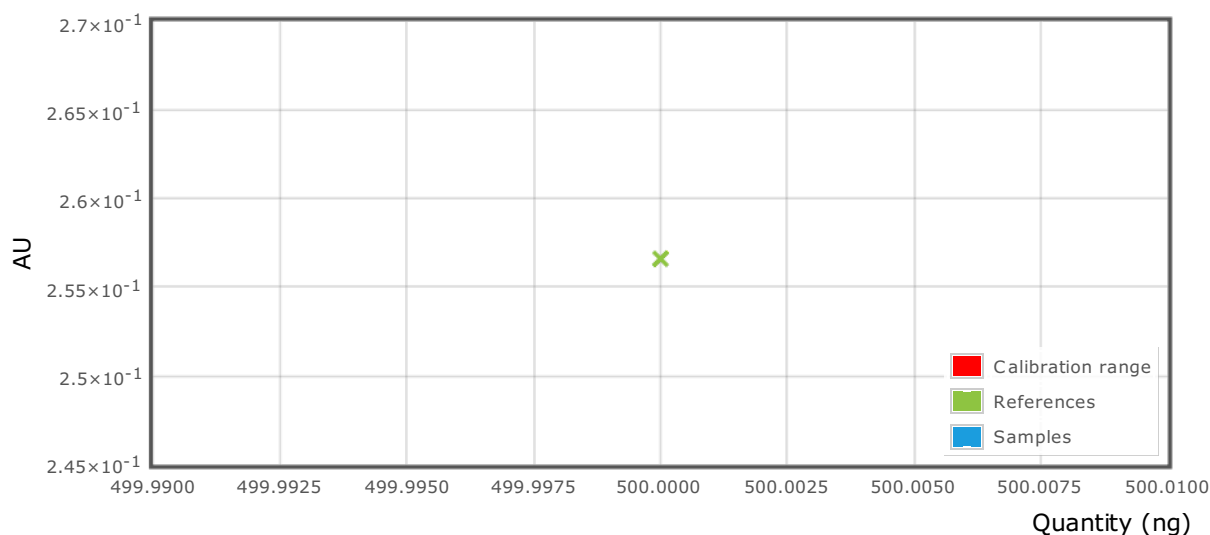


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|                                                                                   |                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regression mode                                                                   | Linear-2                                                                                                                                                                                       |
| Range deviation                                                                   | 5.00 %                                                                                                                                                                                         |
| Related substances                                                                | Default                                                                                                                                                                                        |
| Number of references                                                              | 1                                                                                                                                                                                              |
| Calibration function                                                              | $y=0x$                                                                                                                                                                                         |
| Coefficient of variation                                                          | CV 0.00 %                                                                                                                                                                                      |
| Correlation coefficient                                                           | n/a                                                                                                                                                                                            |
|  | Unable to compute the results for this substance because there wasn't enough groups of references replicas (at least 1 for Linear-1, 2 for Linear2 and Mime-1 and 3 for Polynomial and MiMe-2) |

#### Height calibration for substance THCV @ RT White:



|                                                                                     |                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regression mode                                                                     | Linear-2                                                                                                                                                                                       |
| Range deviation                                                                     | 5.00 %                                                                                                                                                                                         |
| Related substances                                                                  | Default                                                                                                                                                                                        |
| Number of references                                                                | 1                                                                                                                                                                                              |
| Calibration function                                                                | $y=0x$                                                                                                                                                                                         |
| Coefficient of variation                                                            | CV 0.00 %                                                                                                                                                                                      |
| Correlation coefficient                                                             | n/a                                                                                                                                                                                            |
|  | Unable to compute the results for this substance because there wasn't enough groups of references replicas (at least 1 for Linear-1, 2 for Linear2 and Mime-1 and 3 for Polynomial and MiMe-2) |

#### Results:

**Substance having no available results**

|                                                                                     |        |                                                                                                                                                                           |
|-------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | CBDV   | There wasn't any sample application available in the assignments for this substance. Please check that the peaks were correctly detected and assigned for this substance. |
|    | CBDA   | There wasn't any sample application available in the assignments for this substance. Please check that the peaks were correctly detected and assigned for this substance. |
|    | CBGA   | There wasn't any sample application available in the assignments for this substance. Please check that the peaks were correctly detected and assigned for this substance. |
|    | THCV   | There wasn't any sample application available in the assignments for this substance. Please check that the peaks were correctly detected and assigned for this substance. |
|    | CBD    | There wasn't any sample application available in the assignments for this substance. Please check that the peaks were correctly detected and assigned for this substance. |
|    | CBG    | There wasn't any sample application available in the assignments for this substance. Please check that the peaks were correctly detected and assigned for this substance. |
|    | THCA-A | There wasn't any sample application available in the assignments for this substance. Please check that the peaks were correctly detected and assigned for this substance. |
|    | 9-THC  | There wasn't any sample application available in the assignments for this substance. Please check that the peaks were correctly detected and assigned for this substance. |
|    | 8-THC  | There wasn't any sample application available in the assignments for this substance. Please check that the peaks were correctly detected and assigned for this substance. |
|   | CBC    | There wasn't any sample application available in the assignments for this substance. Please check that the peaks were correctly detected and assigned for this substance. |
|  | CBN    | There wasn't any sample application available in the assignments for this substance. Please check that the peaks were correctly detected and assigned for this substance. |

A track marked with  means: this result is outside the regression range given by the reference assignments, but is included in the results because it is in the allowed range deviation.

**Analyst:**

**Reviewer:**