

Analysis: MGW-1

Path: Home/YL Research

Based on method: Triplets Method

Created	27-Jun-2019 13:32:48	visionCATSuser
Modified	27-Jun-2019 16:13:55	visionCATSuser
Last HPTLC log	27-Jun-2019 16:13:55	Analysis modified
Explorer notes		

Track	Vial ID	Description	Volume	Position	Type
1	MeOH blank	MeOH Blank	2.0 µl	A1	Sample
2	Mixture 100	200ng	2.0 µl	B1	Sample
3	9-THC 100	200ng	2.0 µl	C1	Reference
4	CBD 100	200ng	2.0 µl	D1	Reference
5	CBN 100	200ng	2.0 µl	E1	Reference
6	CBG 100	200ng	2.0 µl	F1	Reference
7	CBC 100	200ng	2.0 µl	A2	Reference
8	THCV 100	200ng	2.0 µl	B2	Reference
9	CBDV 100	200ng	2.0 µl	C2	Reference
10	8-THC 100	200ng	2.0 µl	D2	Reference
11	THCA-A 100	200ng	2.0 µl	E2	Reference
12	CBDA 100	200ng	2.0 µl	F2	Reference
13	CBGA 100	200ng	2.0 µl	A3	Reference

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
Visualizer	S/N:230515

Chromatography

Plate layout:

Stationary phase	Merck, HPTLC plates RP-18 F 254s
Plate format	100.0 x 100.0 mm
Application type	Spot
Application	Position Y: 8.0 mm, length: 0.0 mm, width: 0.0 mm
Track	First position X: 20.0 mm, distance: 5.0 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 λ
Optimization for	Resolution
Measurement mode	Absorption
Filter	n/a
Detector mode	Automatic
Scanning speed	20 mm/s
Data resolution	100 $\mu\text{m}/\text{step}$
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	

Take image derivatized plate 1b - 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	
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Data acquisition

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

Executed	27-Jun-2019 13:40:29 visionCATSuser
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Development 1 - Chamber:

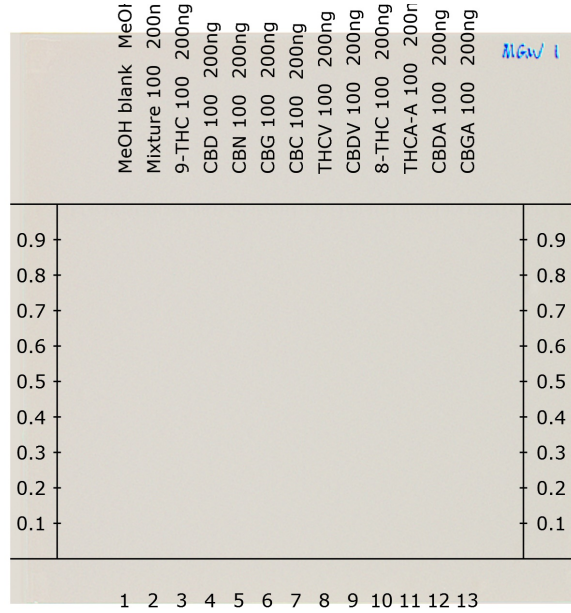
Executed 27-Jun-2019 15:12:25 visionCATSuser

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

Executed 27-Jun-2019 15:13:20 visionCATSuser

RT White

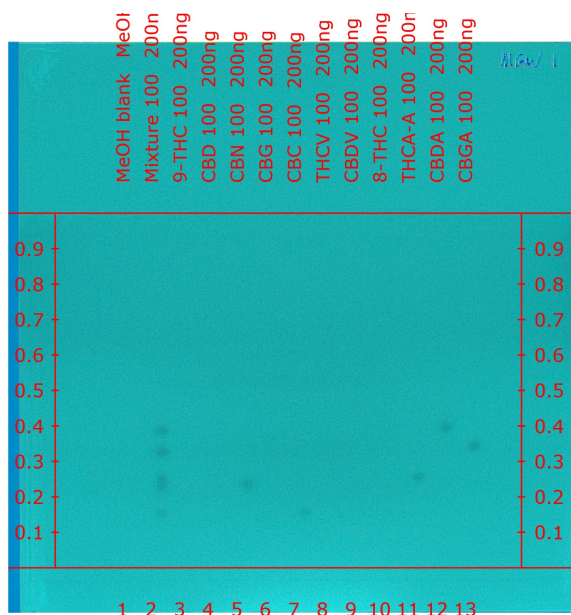
Developed, RemTransVis



Exposure	0.047 s
Contrast	1
Normalized exposure	Disabled
Clarify	Disabled
White balance	1.00, 1.00, 1.00

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R 254

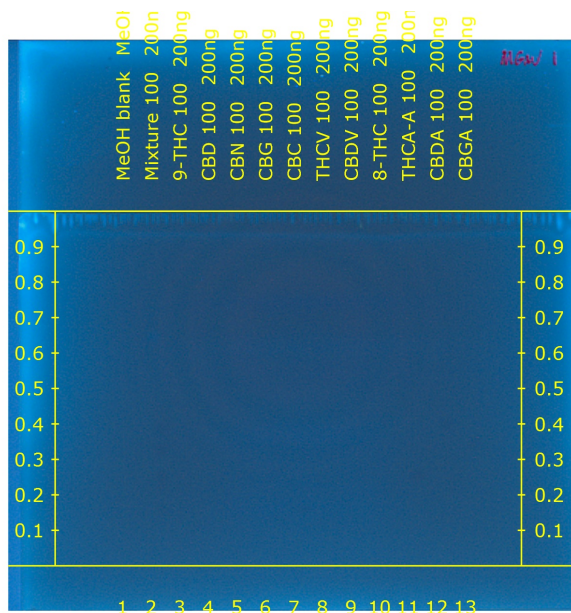
visionCATS
Developed, Remission254



Exposure	0.209 s
Contrast	1
Normalized exposure	Disabled
Clarify	Disabled
White balance	1.00, 1.00, 1.00

R 366

Developed, Remission366



Exposure	6.388 s
Contrast	1
Normalized exposure	Disabled
Clarify	Disabled
White balance	1.00, 1.00, 1.00

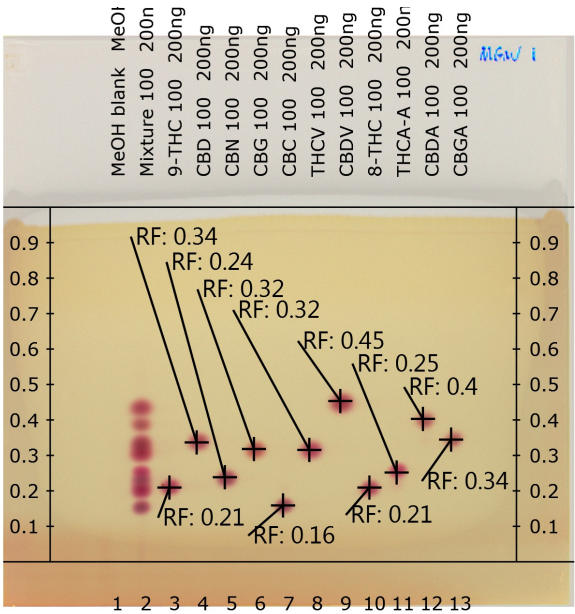
Derivatization 1 - dip:

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Executed 27-Jun-2019 15:27:24 visionCATSuser visionCATS

Take image derivatized plate 1b - Visualizer (S/N: 230515):
Executed 27-Jun-2019 15:57:25 visionCATSuser

RT White

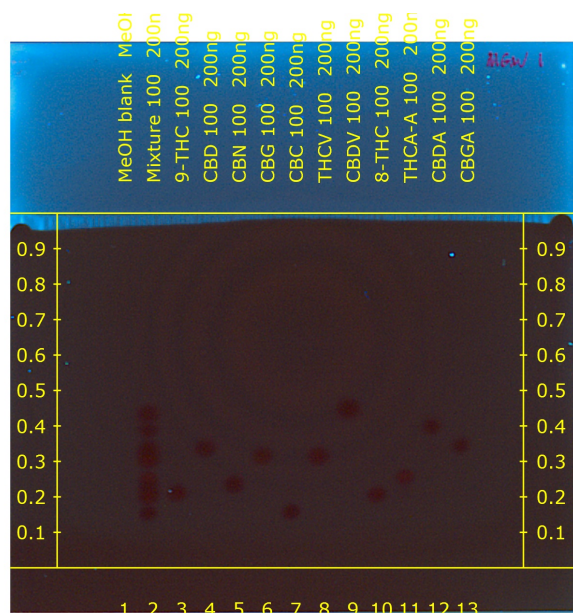
Derivatized, RemTransVis



Exposure	0.063 s
Contrast	1
Normalized exposure	Disabled
Clarify	Disabled
White balance	1.01, 1.00, 1.00

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R 366

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Derivatized, Remission366



Exposure	8.050 s
Contrast	1
Normalized exposure	Disabled
Clarify	Disabled
White balance	1.00, 1.00, 1.00

Evaluation 1 :

Validated	false
Step	Take image derivatized plate 1b
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 %

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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 %

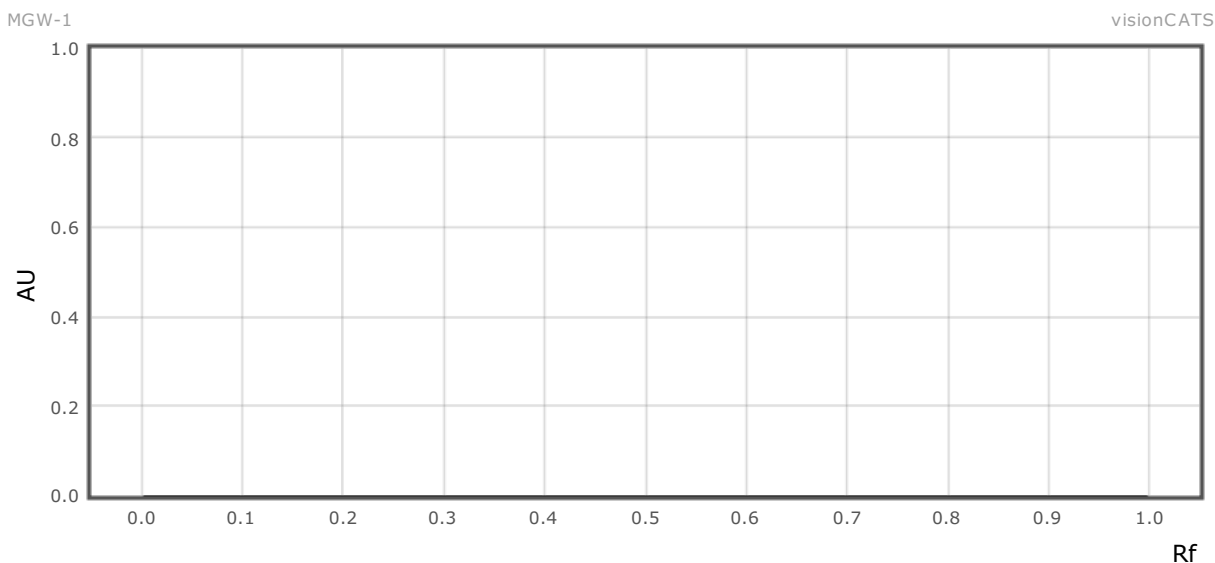
CBGA 100		
Substance Name	Concentration	Purity
CBGA	100.000 µg/ml	100.00 %

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 0.05

Scan:	
Wavelength	RT White

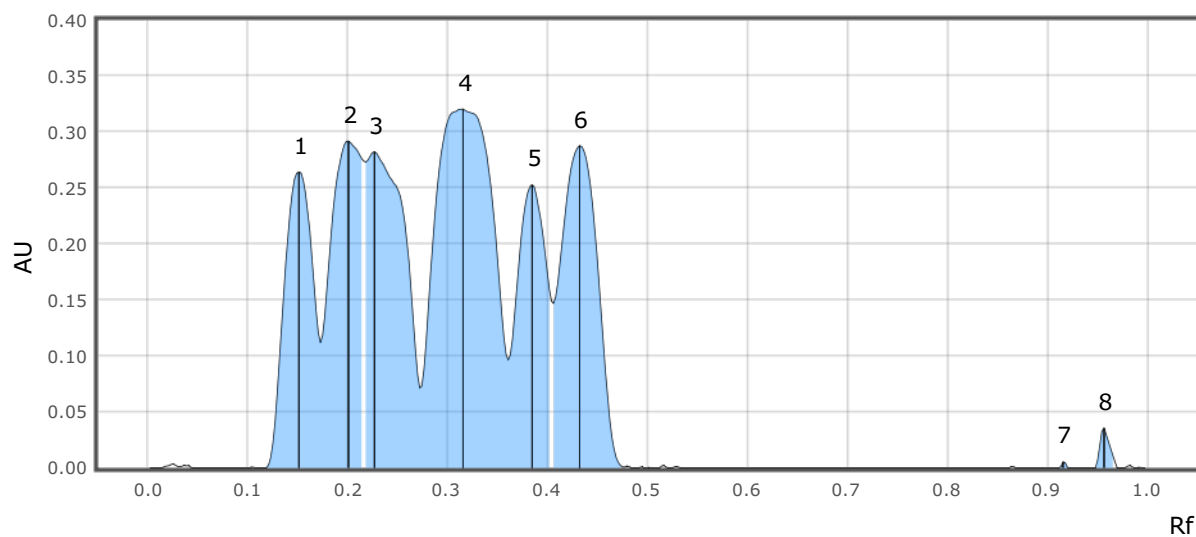
Track 1:	
Type	Sample
Vial ID	MeOH blank
Description	MeOH Blank
Volume	2.0 µl



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	200ng
Volume	2.0 µl



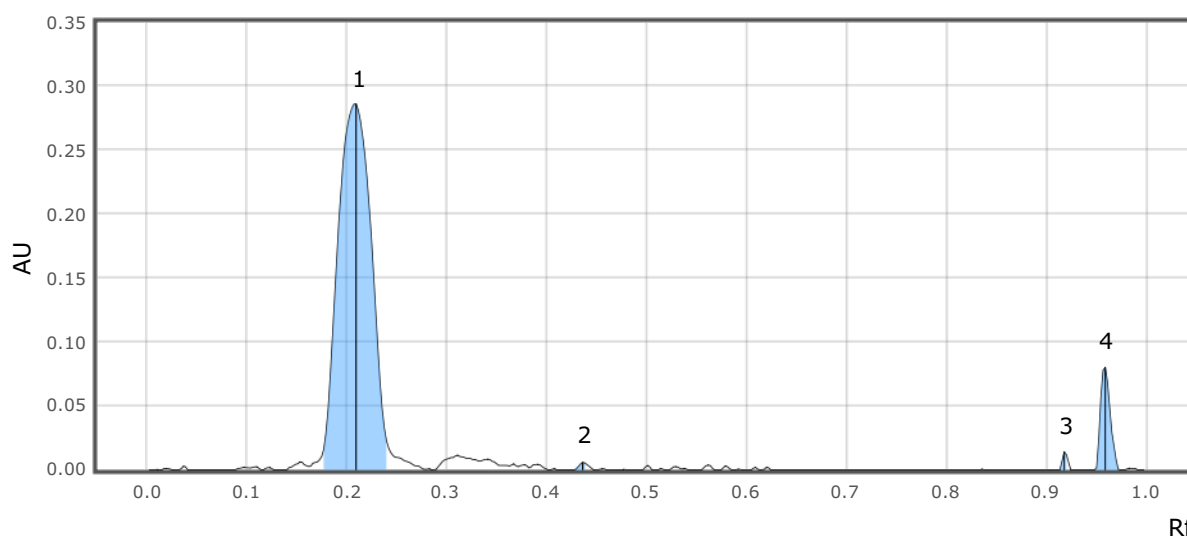
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Peak #	Start		Max			End		Area		Manual peak	Substance Name
	Rf	H	Rf	H	%	Rf	H	A	%		
1	0.116	0.0000	0.151	0.2642	15.19	0.173	0.1119	0.00875	11.77	No	
2	0.173	0.1119	0.201	0.2918	16.77	0.216	0.2741	0.01052	14.14	No	
3	0.218	0.2730	0.227	0.2822	16.22	0.272	0.0713	0.01244	16.73	No	
4	0.272	0.0713	0.315	0.3204	18.42	0.361	0.0963	0.02178	29.28	No	
5	0.361	0.0963	0.384	0.2529	14.54	0.404	0.1491	0.00847	11.38	No	
6	0.406	0.1469	0.432	0.2876	16.53	0.475	0.0007	0.01200	16.14	No	
7	0.912	0.0000	0.916	0.0053	0.30	0.922	0.0000	0.00002	0.03	No	
8	0.948	0.0000	0.957	0.0354	2.04	0.970	0.0000	0.00039	0.53	No	

Track 3:

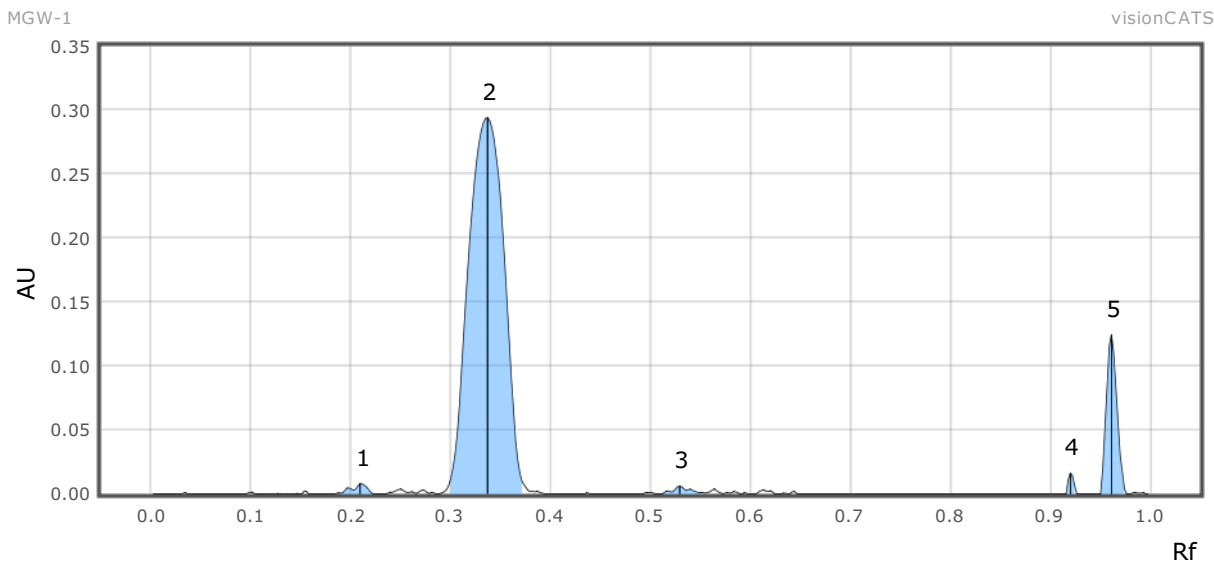
Type	Reference
Vial ID	9-THC 100
Description	200ng
Volume	2.0 µl



Peak #	Start		Max			End		Area		Manual peak	Substance Name
	Rf	H	Rf	H	%	Rf	H	A	%		
1	0.176	0.0159	0.209	0.2859	74.13	0.241	0.0173	0.01106	91.45	Yes	9-THC
2	0.428	0.0000	0.436	0.0057	1.48	0.447	0.0000	0.00006	0.48	No	
3	0.914	0.0000	0.918	0.0141	3.65	0.925	0.0000	0.00008	0.69	No	
4	0.948	0.0000	0.959	0.0800	20.73	0.974	0.0000	0.00089	7.38	No	

Track 4:

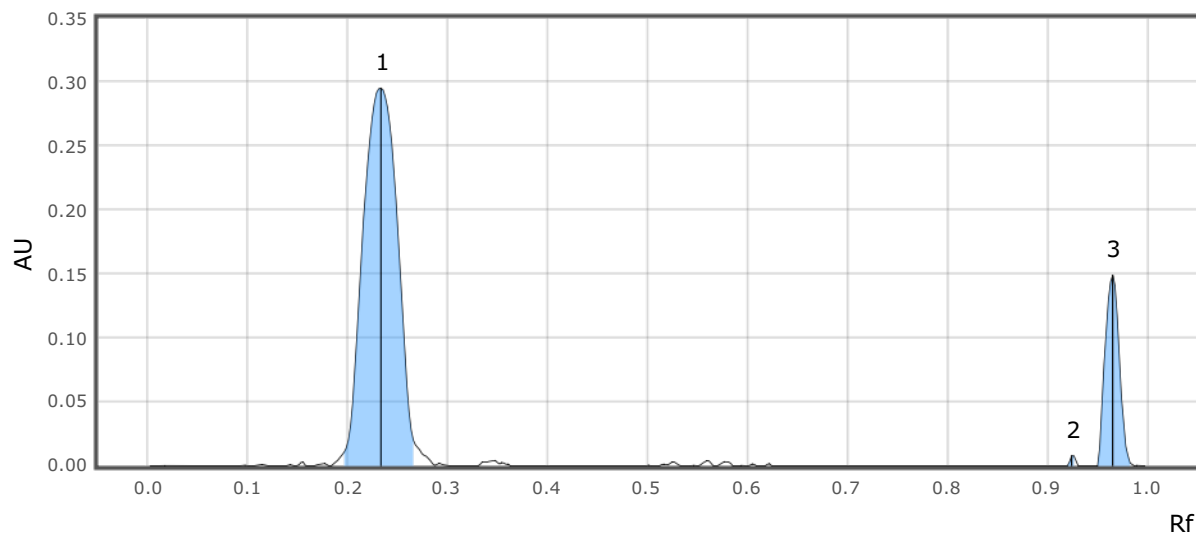
Type	Reference
Vial ID	CBD 100
Description	200ng
Volume	2.0 µl



Peak #	Start		Max			End		Area		Manual peak	Substance Name
	Rf	H	Rf	H	%	Rf	H	A	%		
1	0.183	0.0000	0.209	0.0079	1.77	0.222	0.0000	0.00014	0.97	No	
2	0.299	0.0118	0.337	0.2939	65.52	0.373	0.0069	0.01210	86.71	Yes	CBD
3	0.512	0.0000	0.529	0.0060	1.34	0.555	0.0006	0.00011	0.79	No	
4	0.916	0.0000	0.920	0.0163	3.64	0.927	0.0000	0.00010	0.73	No	
5	0.951	0.0000	0.961	0.1244	27.73	0.977	0.0000	0.00151	10.80	No	

Track 5:

Type	Reference
Vial ID	CBN 100
Description	200ng
Volume	2.0 µl



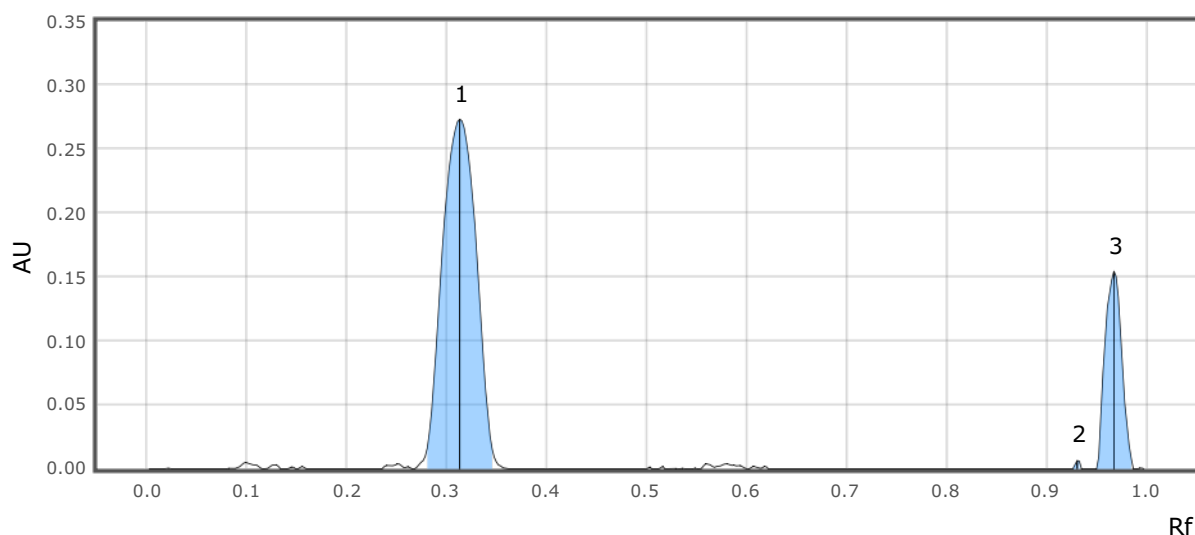
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Peak #	Start		Max			End		Area		Manual peak	Substance Name
	Rf	H	Rf	H	%	Rf	H	A	%		
1	0.196	0.0106	0.233	0.2952	65.31	0.268	0.0164	0.01180	82.61	Yes	CBN
2	0.920	0.0000	0.925	0.0078	1.73	0.931	0.0000	0.00005	0.34	No	
3	0.951	0.0000	0.966	0.1490	32.96	0.987	0.0000	0.00244	17.05	No	

Track 6:

Type	Reference
Vial ID	CBG 100
Description	200ng
Volume	2.0 µl



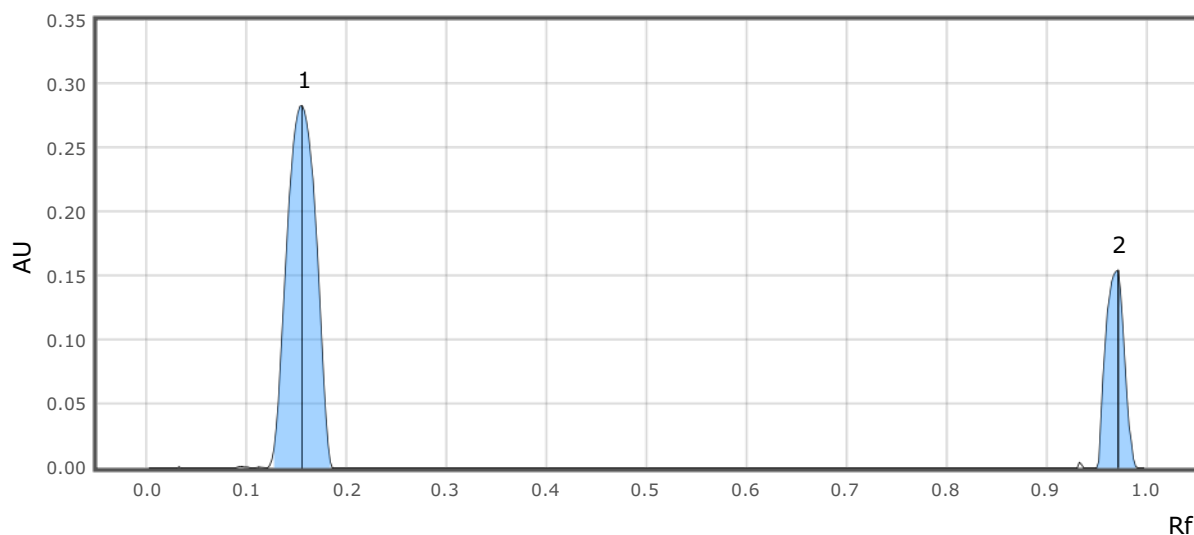
Peak #	Start		Max			End		Area		Manual peak	Substance Name
	Rf	H	Rf	H	%	Rf	H	A	%		
1	0.280	0.0164	0.313	0.2732	62.93	0.346	0.0153	0.01067	78.02	Yes	CBG
2	0.927	0.0000	0.931	0.0065	1.49	0.935	0.0000	0.00003	0.25	No	
3	0.951	0.0000	0.968	0.1545	35.57	0.987	0.0000	0.00297	21.73	No	

Track 7:

Type	Reference
Vial ID	CBC 100
Description	200ng
Volume	2.0 µl

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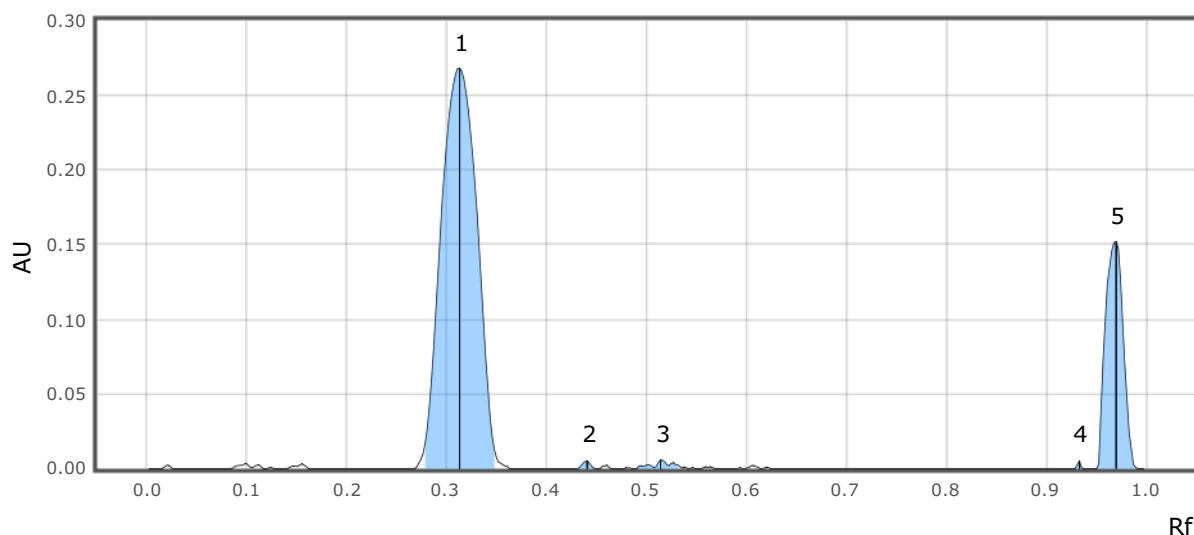
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Peak #	Start		Max			End		Area		Manual peak	Substance Name
	Rf	H	Rf	H	%	Rf	H	A	%		
1	0.126	0.0064	0.155	0.2832	64.69	0.186	0.0000	0.00962	74.45	Yes	CBC
2	0.951	0.0000	0.972	0.1546	35.31	0.992	0.0000	0.00330	25.55	No	

Track 8:

Type	Reference
Vial ID	THCV 100
Description	200ng
Volume	2.0 µl



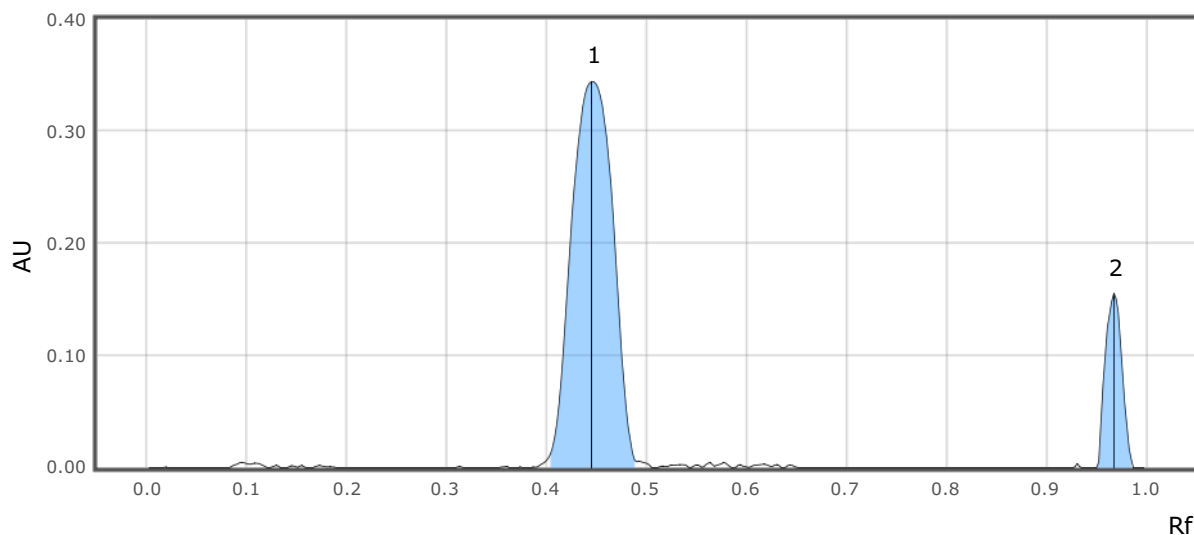
Peak #	Start		Max			End		Area		Manual peak	Substance Name
	Rf	H	Rf	H	%	Rf	H	A	%		
1	0.277	0.0099	0.313	0.2678	61.48	0.349	0.0127	0.01111	76.99	Yes	THCV
2	0.430	0.0000	0.441	0.0051	1.17	0.451	0.0000	0.00005	0.32	No	
3	0.488	0.0000	0.514	0.0058	1.32	0.536	0.0003	0.00012	0.82	No	
4	0.929	0.0000	0.933	0.0052	1.19	0.938	0.0000	0.00002	0.13	No	
5	0.951	0.0000	0.970	0.1518	34.84	0.992	0.0000	0.00314	21.74	No	

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Track 9:

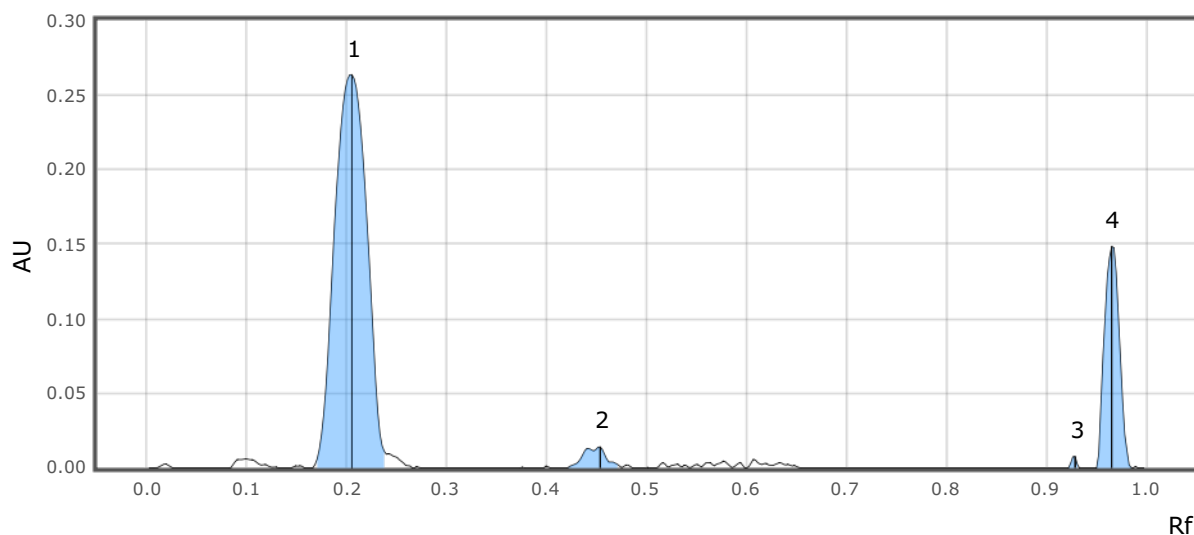
Type	Reference
Vial ID	CBDV 100
Description	200ng
Volume	2.0 µl



Peak #	Start		Max			End		Area		Manual peak	Substance Name
	Rf	H	Rf	H	%	Rf	H	A	%		
1	0.403	0.0121	0.445	0.3442	68.92	0.490	0.0053	0.01659	84.67	Yes	CBDV
2	0.951	0.0000	0.968	0.1552	31.08	0.987	0.0000	0.00300	15.33	No	

Track 10:

Type	Reference
Vial ID	8-THC 100
Description	200ng
Volume	2.0 µl



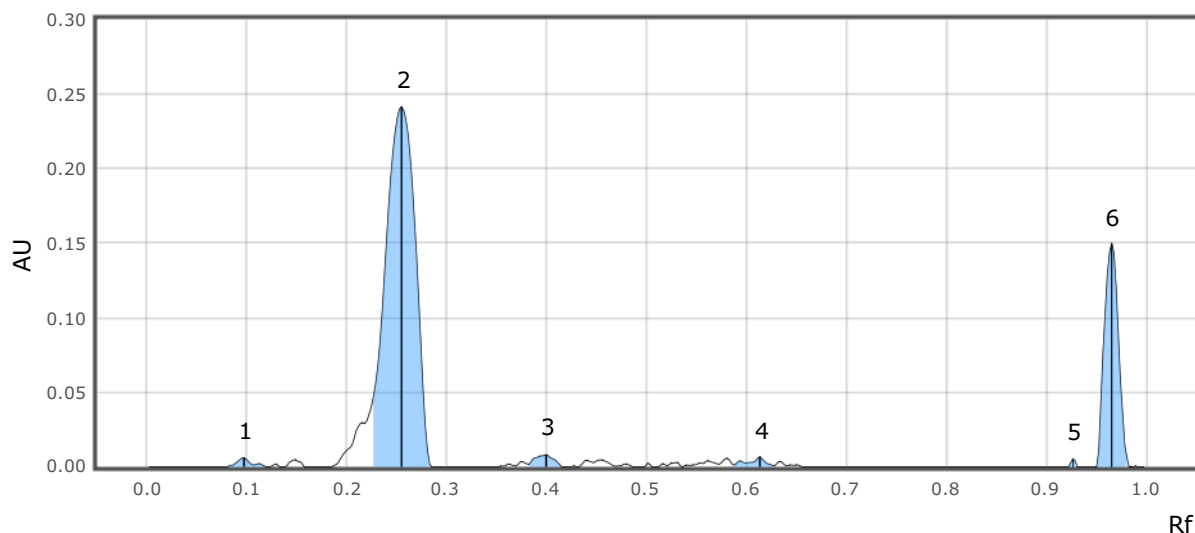
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Peak #	Start		Max			End		Area		Manual peak	Substance Name
	Rf	H	Rf	H	%	Rf	H	A	%		
1	0.170	0.0060	0.205	0.2634	60.80	0.238	0.0111	0.00980	76.75	Yes	8-THC
2	0.421	0.0000	0.454	0.0141	3.25	0.475	0.0001	0.00037	2.92	No	
3	0.922	0.0000	0.929	0.0075	1.74	0.933	0.0000	0.00004	0.35	No	
4	0.951	0.0000	0.966	0.1482	34.21	0.987	0.0000	0.00255	19.99	No	

Track 11:

Type	Reference
Vial ID	THCA-A 100
Description	200ng
Volume	2.0 µl



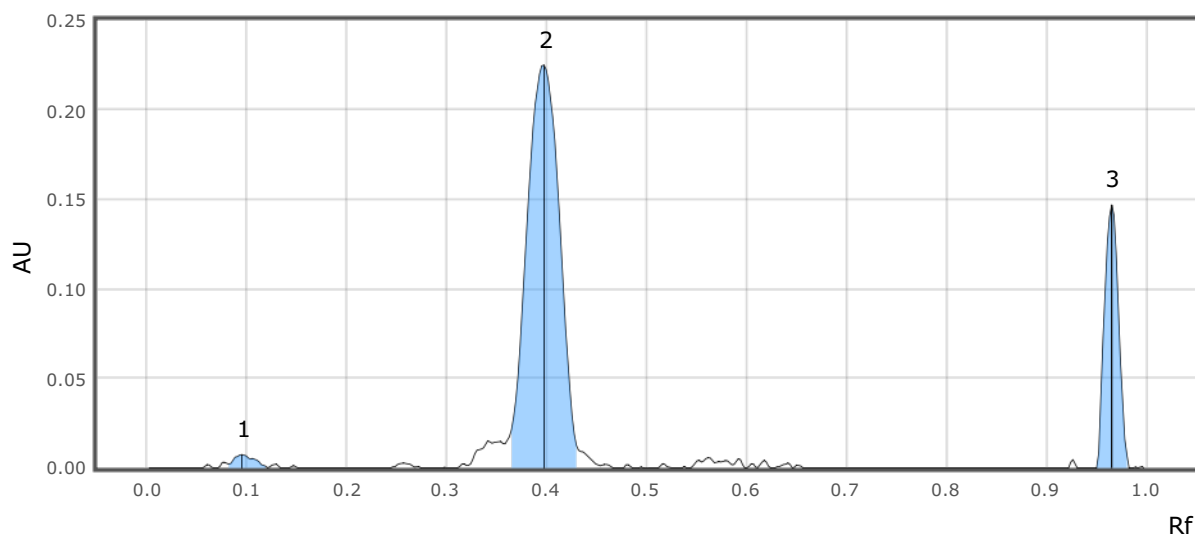
Peak #	Start		Max			End		Area		Manual peak	Substance Name
	Rf	H	Rf	H	%	Rf	H	A	%		
1	0.080	0.0000	0.097	0.0061	1.47	0.121	0.0000	0.00010	0.89	No	
2	0.226	0.0468	0.255	0.2413	57.79	0.285	0.0000	0.00822	74.10	Yes	THCA-A
3	0.382	0.0015	0.400	0.0081	1.95	0.417	0.0000	0.00018	1.58	No	
4	0.588	0.0012	0.613	0.0067	1.61	0.629	0.0009	0.00013	1.18	No	
5	0.922	0.0000	0.927	0.0055	1.32	0.931	0.0000	0.00003	0.24	No	
6	0.951	0.0000	0.966	0.1497	35.86	0.983	0.0000	0.00244	21.99	No	

Track 12:

Type	Reference
Vial ID	CBDA 100
Description	200ng
Volume	2.0 µl

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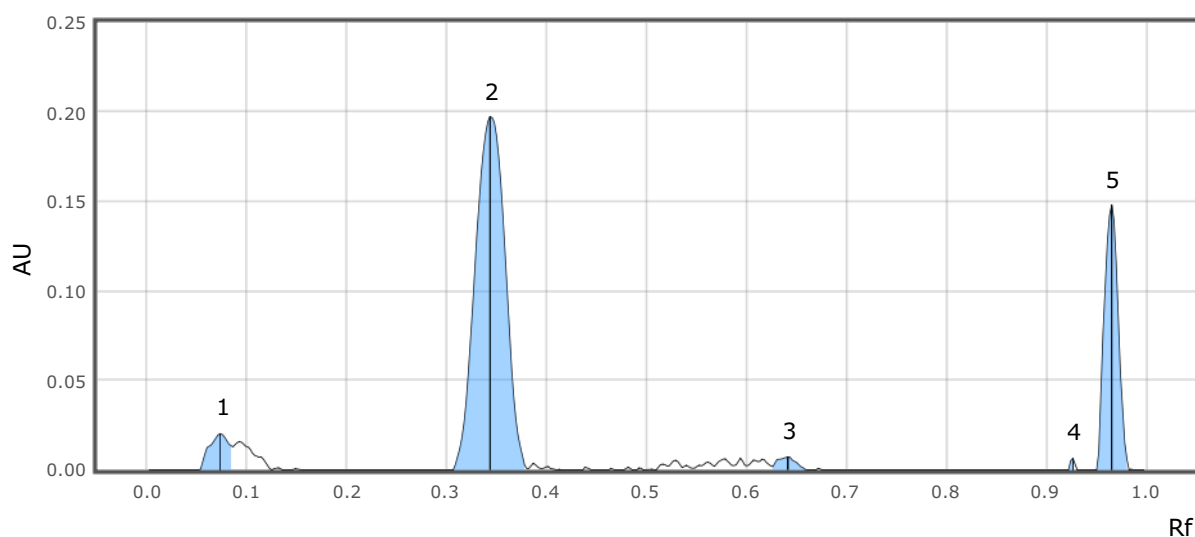
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Peak #	Start		Max			End		Area		Manual peak	Substance Name
	Rf	H	Rf	H	%	Rf	H	A	%		
1	0.082	0.0021	0.095	0.0073	1.94	0.121	0.0001	0.00017	1.57	No	
2	0.363	0.0174	0.397	0.2248	59.32	0.431	0.0099	0.00853	76.92	Yes	CBDA
3	0.951	0.0000	0.966	0.1468	38.74	0.983	0.0000	0.00238	21.51	No	

Track 13:

Type	Reference
Vial ID	CBGA 100
Description	200ng
Volume	2.0 µl



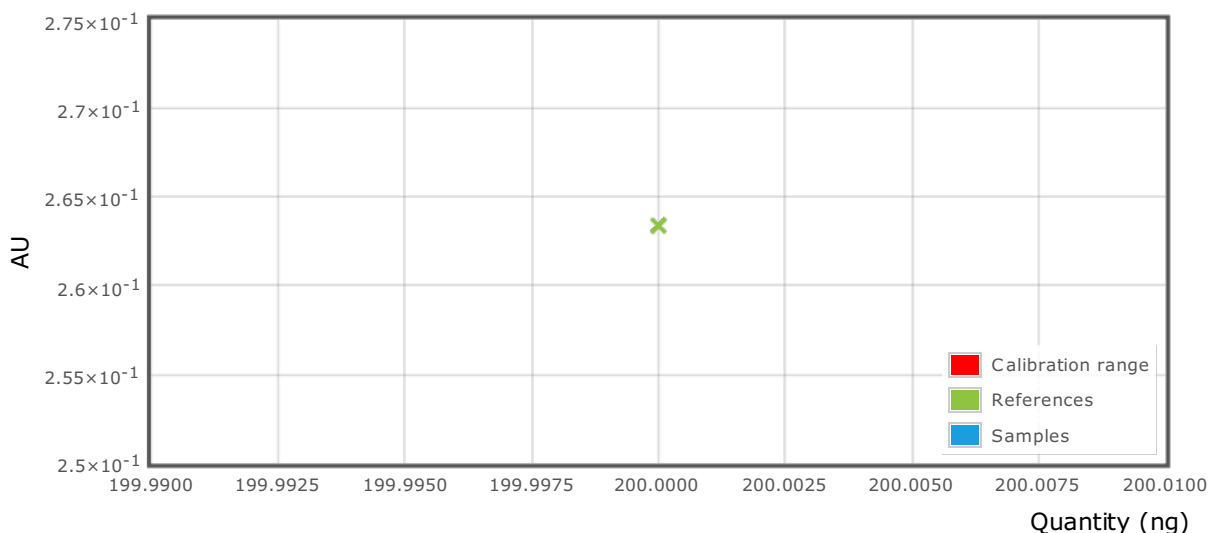
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Peak #	Start		Max			End		Area		Manual peak	Substance Name
	Rf	H	Rf	H	%	Rf	H	A	%		
1	0.052	0.0000	0.073	0.0202	5.33	0.086	0.0129	0.00047	4.73	No	
2	0.307	0.0000	0.343	0.1972	52.04	0.380	0.0008	0.00683	69.30	No	CBGA
3	0.626	0.0018	0.642	0.0073	1.92	0.661	0.0000	0.00015	1.53	No	
4	0.922	0.0000	0.927	0.0064	1.70	0.931	0.0000	0.00003	0.33	No	
5	0.951	0.0000	0.966	0.1478	39.01	0.983	0.0000	0.00237	24.11	No	

Calibration results:

Height calibration for substance 8-THC @ RT White:

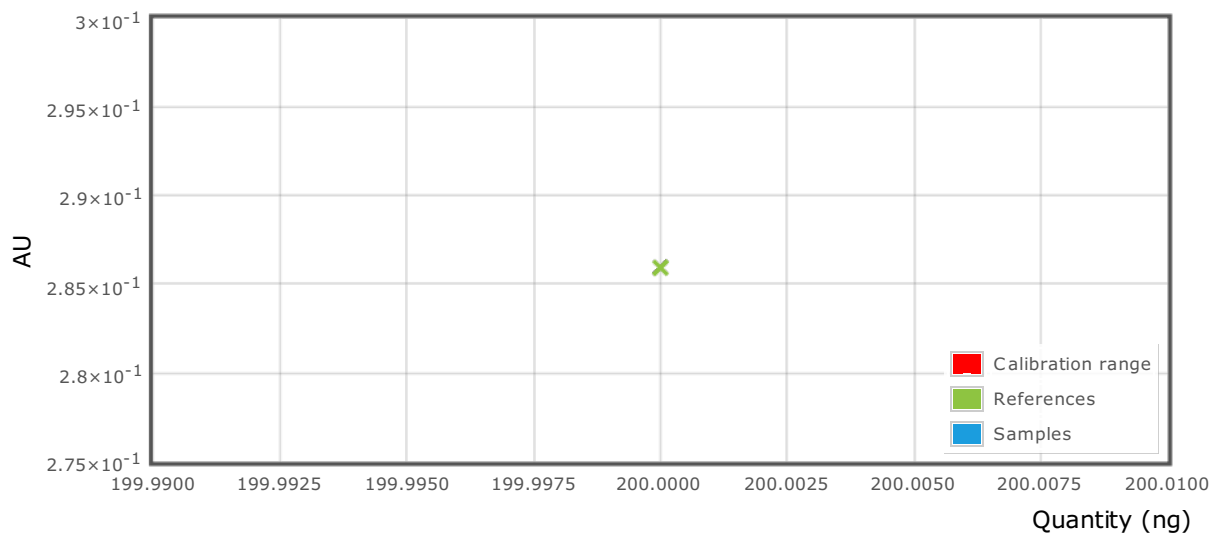


Regression mode	Linear-2
Range deviation	5.00 %
Related substances	Default
Number of references	1
Calibration function	$y=0x$
Coefficient of variation	CV 0.00 %
Correlation coefficient	n/a
	Unable to compute the results for this substance because there wasn't enough groups of references replicas (at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

Height calibration for substance 9-THC @ RT White:

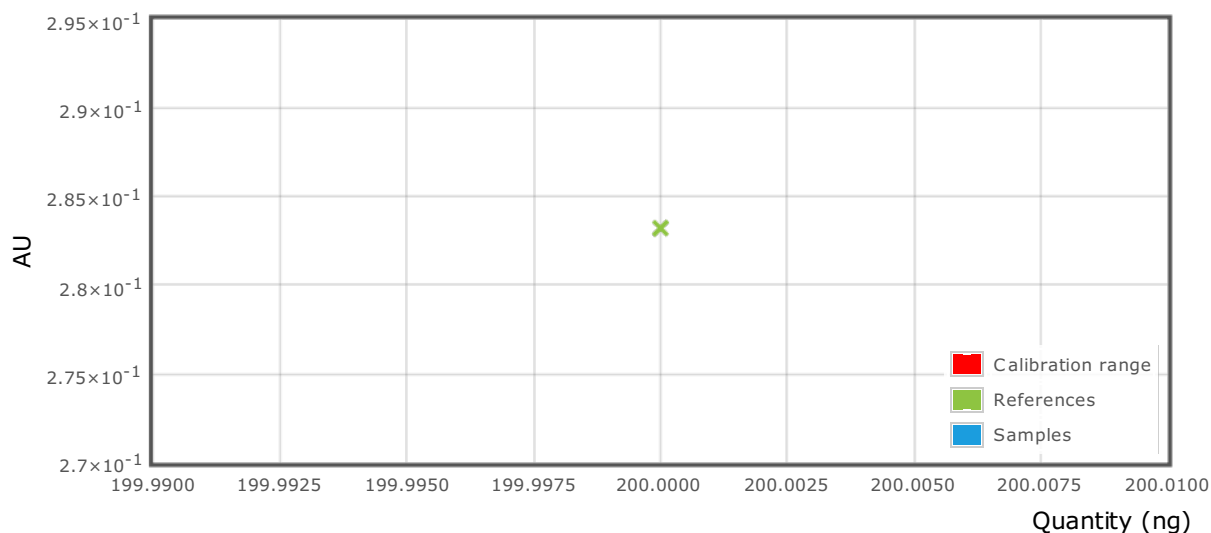
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Regression mode	Linear-2
Range deviation	5.00 %
Related substances	Default
Number of references	1
Calibration function	$y=0x$
Coefficient of variation	CV 0.00 %
Correlation coefficient	n/a
	Unable to compute the results for this substance because there 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 CBC @ RT White:

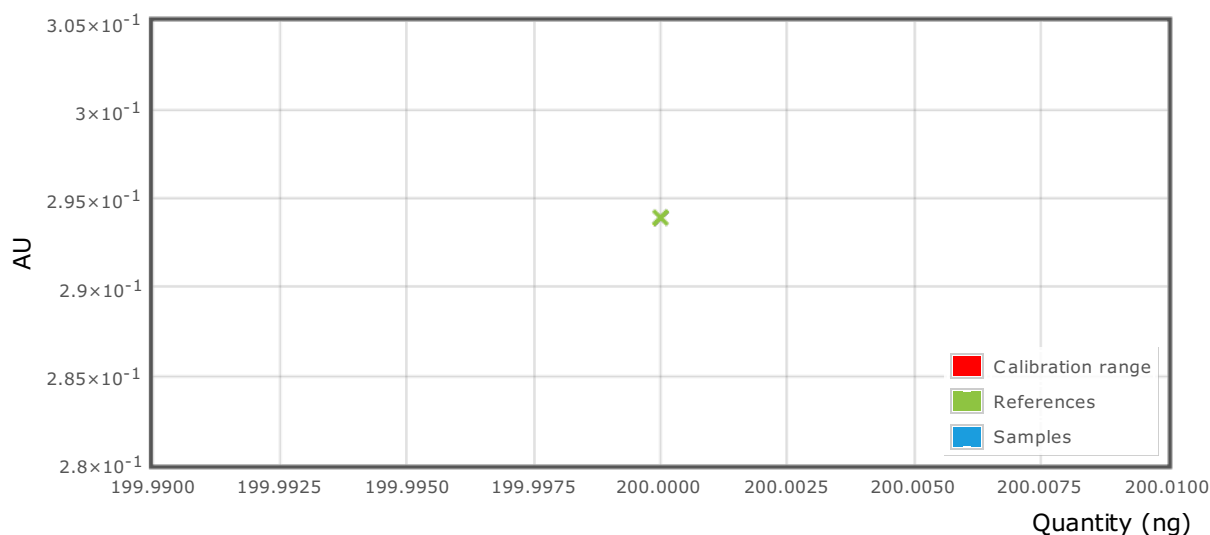


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Regression mode	Linear-2
Range deviation	5.00 %
Related substances	Default
Number of references	1
Calibration function	$y=0x$
Coefficient of variation	CV 0.00 %
Correlation coefficient	n/a
	Unable to compute the results for this substance because there 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 CBD @ RT White:

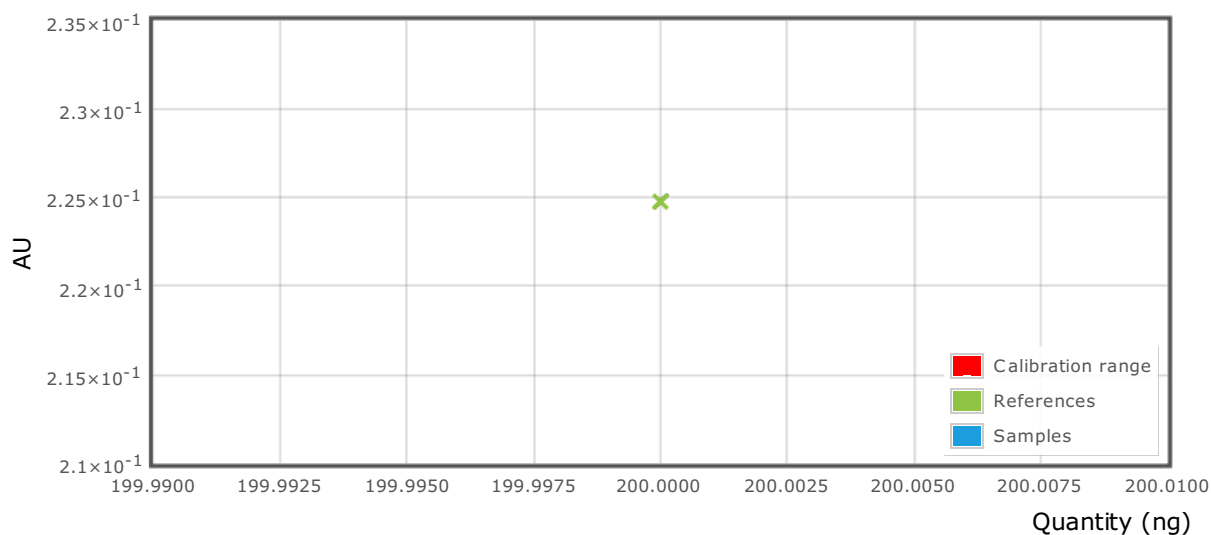


Regression mode	Linear-2
Range deviation	5.00 %
Related substances	Default
Number of references	1
Calibration function	$y=0x$
Coefficient of variation	CV 0.00 %
Correlation coefficient	n/a
	Unable to compute the results for this substance because there wasn't enough groups of references replicas (at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

Height calibration for substance CBDA @ RT White:

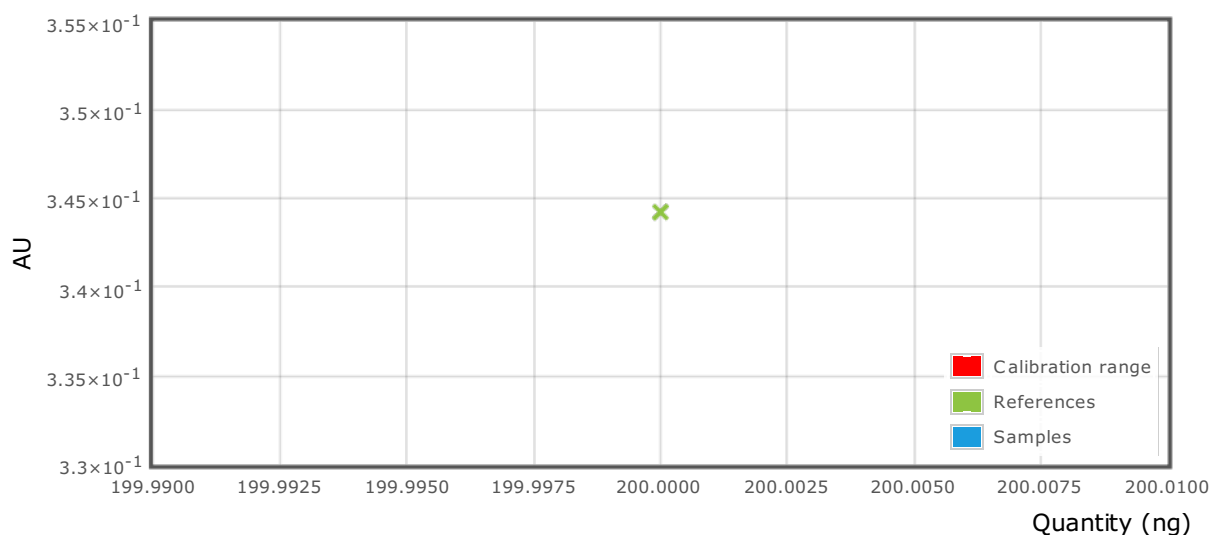
MGW-1

visionCATS



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:

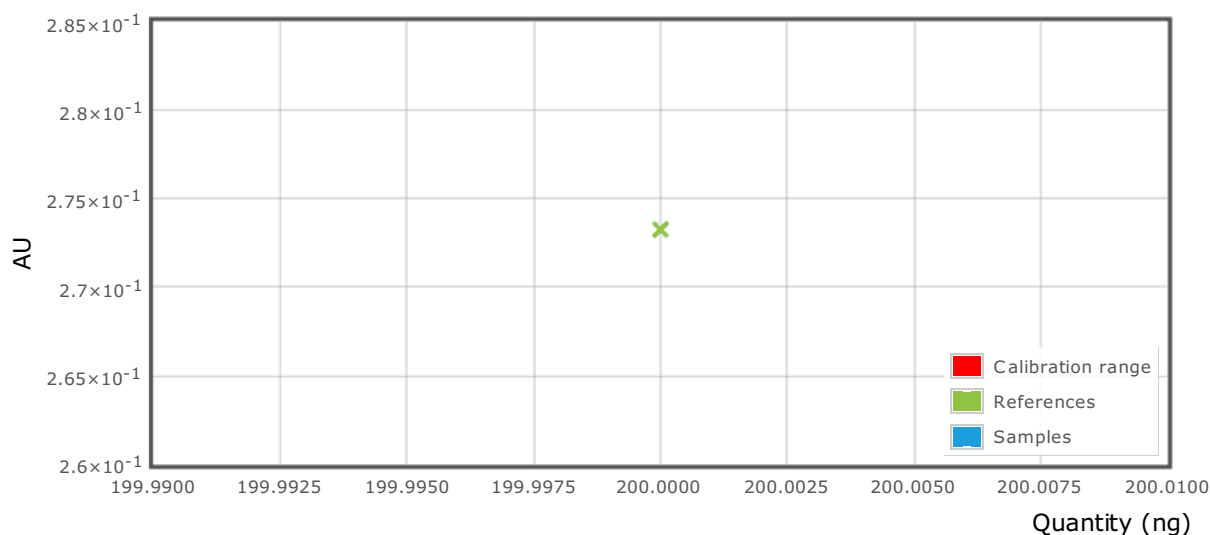


MGW-1

visionCATS

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:

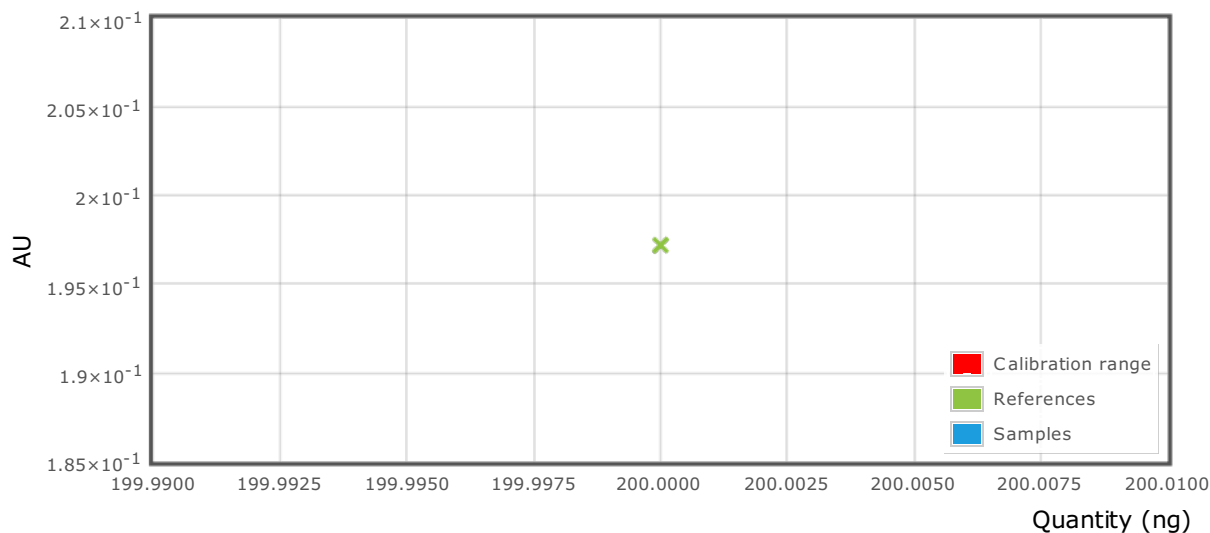


Regression mode	Linear-2
Range deviation	5.00 %
Related substances	Default
Number of references	1
Calibration function	$y=0x$
Coefficient of variation	CV 0.00 %
Correlation coefficient	n/a
	Unable to compute the results for this substance because there wasn't enough groups of references replicas (at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

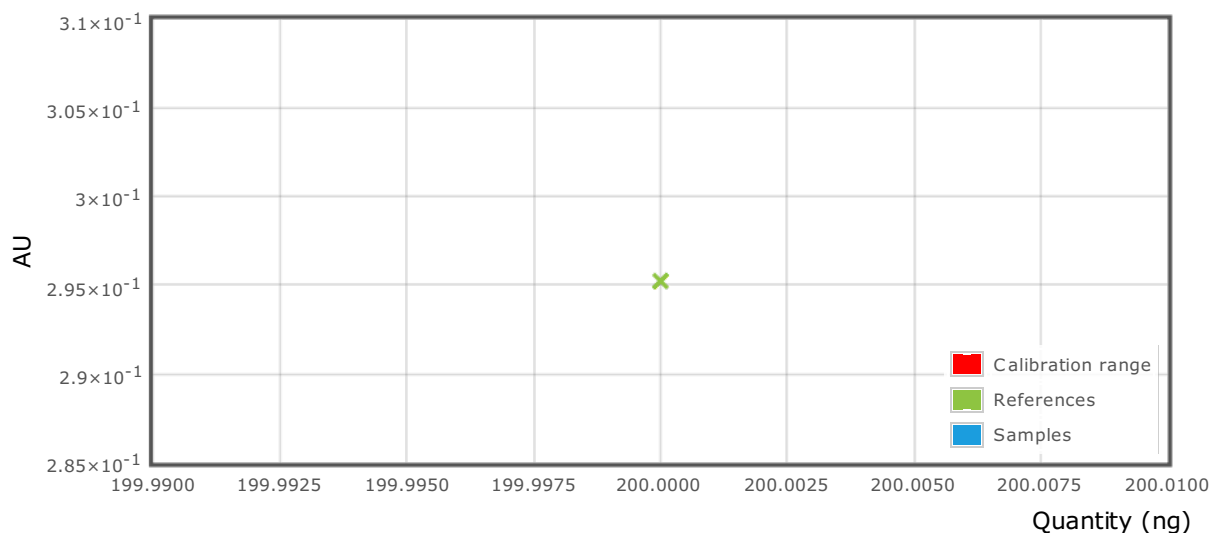
MGW-1

visionCATS



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:

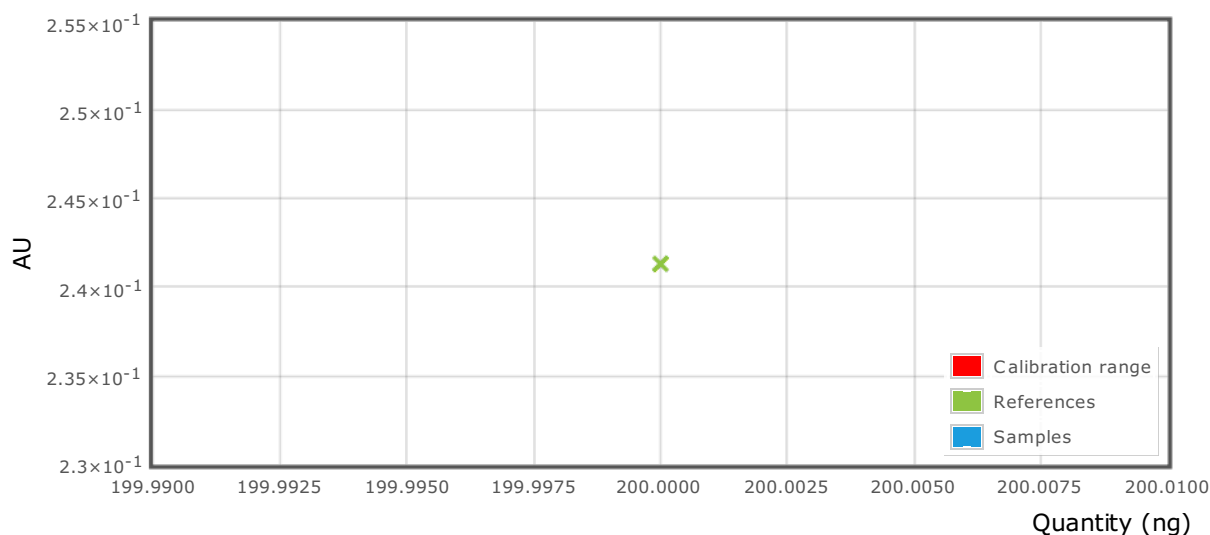


MGW-1

visionCATS

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:

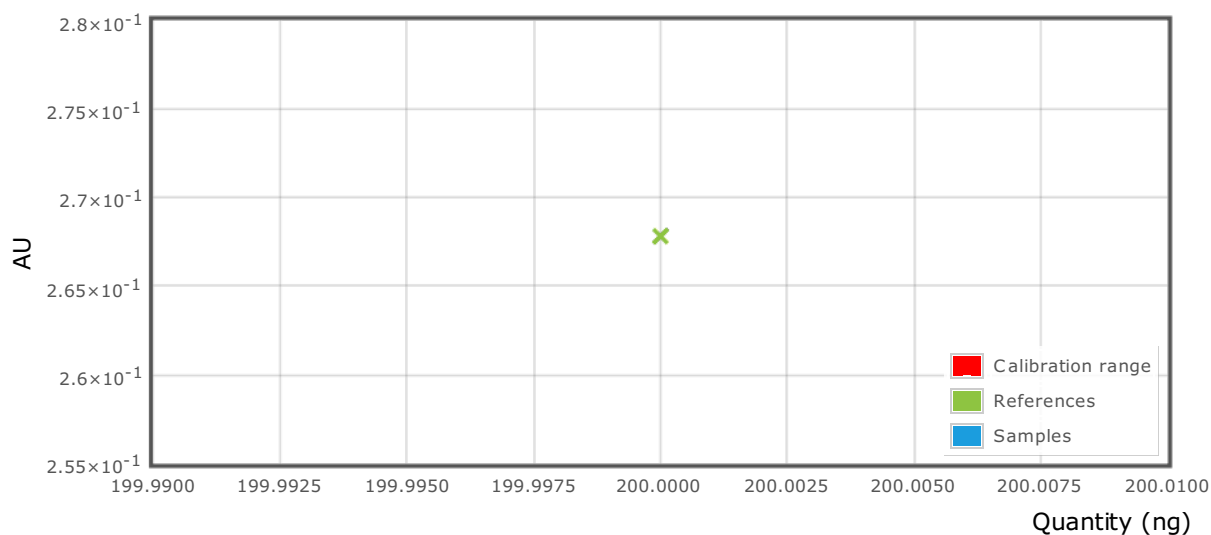


Regression mode	Linear-2
Range deviation	5.00 %
Related substances	Default
Number of references	1
Calibration function	$y=0x$
Coefficient of variation	CV 0.00 %
Correlation coefficient	n/a
	Unable to compute the results for this substance because there wasn't enough groups of references replicas (at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

MGW-1

visionCATS



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		
	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.
	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.
	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.
	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.
	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.
	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.
	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.
	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.
	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.
	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.

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: