

Analytical and Bioanalytical Chemistry

Electronic Supplementary Material

Quantitative determination and validation of 17 cannabinoids in cannabis and hemp using liquid chromatography–mass spectrometry

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Table of Contents

List of Tables

Table S1	Calibration standard and QC sample concentrations
Table S2	Chromatographic peak resolution

List of Figures

Figure S1	Δ 9-THC linear regression
Figure S2	Δ 9-THCA linear regression
Figure S3	CBD linear regression
Figure S4	CBDA linear regression
Figure S5	CBG linear regression
Figure S6	CBGA linear regression
Figure S7	CBN linear regression
Figure S8	CBNA linear regression
Figure S9	CBC linear regression
Figure S10	CBCA linear regression
Figure S11	THCV linear regression
Figure S12	THCVA linear regression
Figure S13	CBDV linear regression
Figure S14	CBDVA linear regression
Figure S15	CBL linear regression
Figure S16	CBLA linear regression
Figure S17	Δ 8-THC linear regression

Table S1 Calibration standard and QC sample concentrations (prepared in methanol, concentrations for each of 17 cannabinoids for each standard level)

Standard / QC Sample ID	Cannabinoid Concentration (ng/mL)
STD-10	10 000
STD-9	9 000
STD-8	6 000
STD-7	2 000
STD-6	1 000
STD-5	400
STD-4	100
STD-3	40
STD-2	20
STD-1	10
STD-0	0
QC-3	8 000
QC-2	1 500
QC-1	30
QC-LLOQ	10

Table S2 Chromatographic peak resolution of key cannabinoids within 2 *m/z* of each other

Cannabinoid-1	Cannabinoid-2	$\Delta m/z$	Resolution
CBDV	THCV	0	5.8
CBD	$\Delta 9$ -THC	0	7.2
$\Delta 9$ -THC	$\Delta 8$ -THC	0	1.9
$\Delta 8$ -THC	CBC	0	1.9
CBC	CBL	0	2.4
CBD	CBG	2	4.7
CBG	$\Delta 9$ -THC	2	2.1
CBDVA	THCVA	0	7.4
CBDA	$\Delta 9$ -THCA	0	8.5
$\Delta 9$ -THCA	CBCA	0	3.6
CBCA	CBLA	0	2.1
CBDA	CBGA	2	9.5
$\Delta 9$ -THCA	CBGA	2	1.0

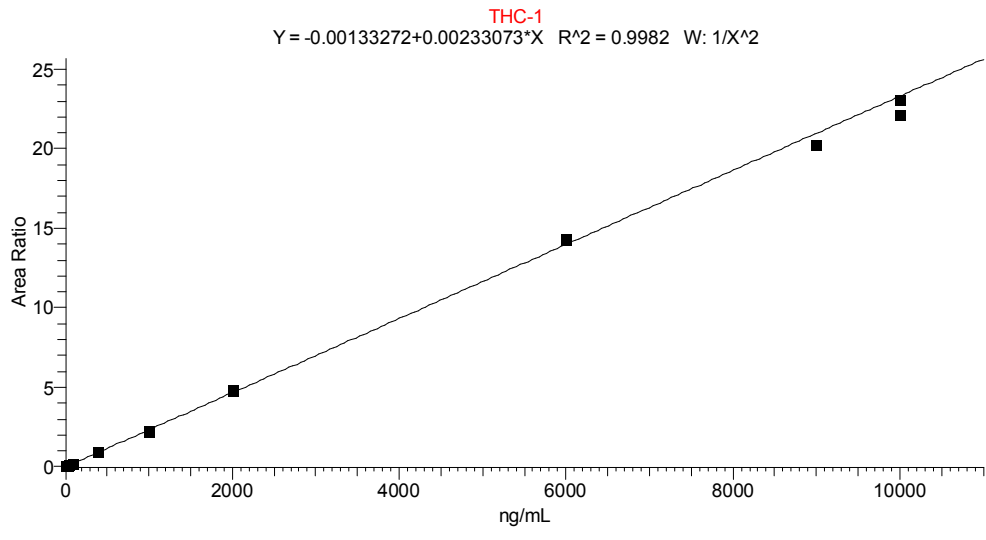


Fig. S1 $\Delta 9$ -THC Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

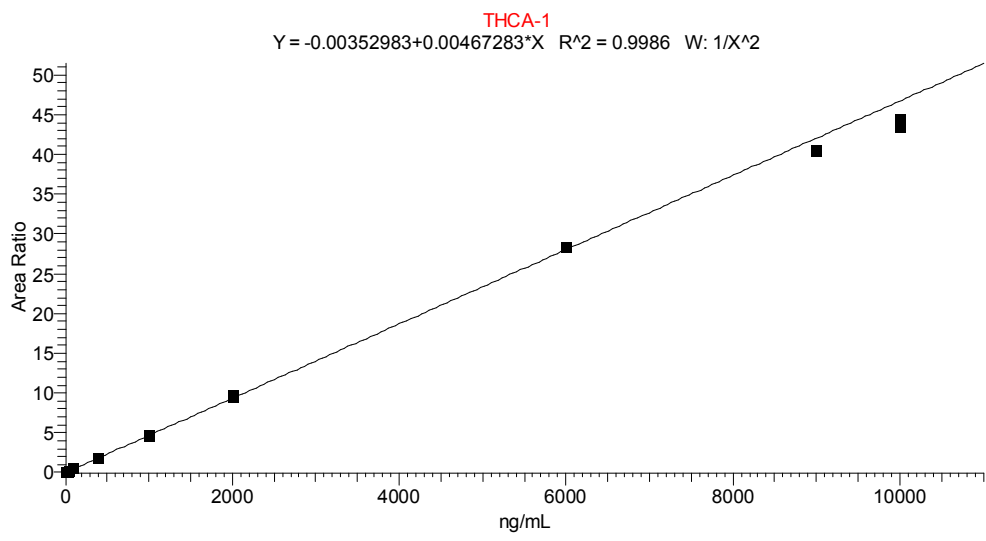


Fig. S2 $\Delta 9$ -THCA Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

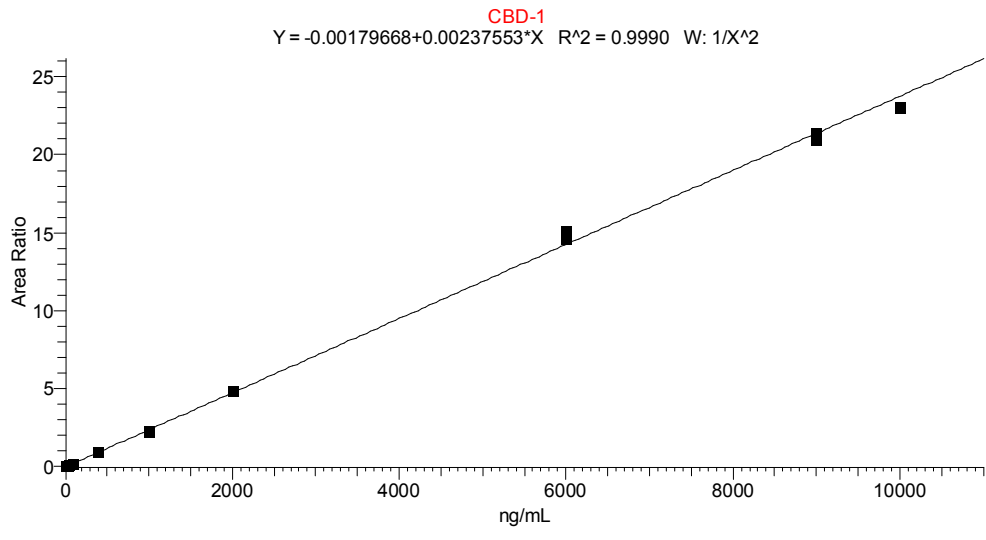


Fig. S3 CBD Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

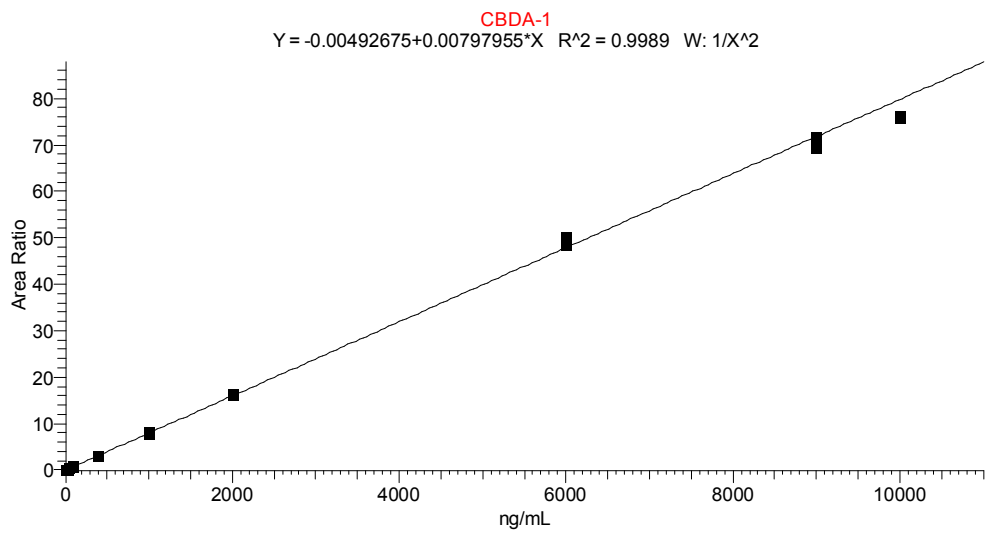


Fig. S4 CBDA Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

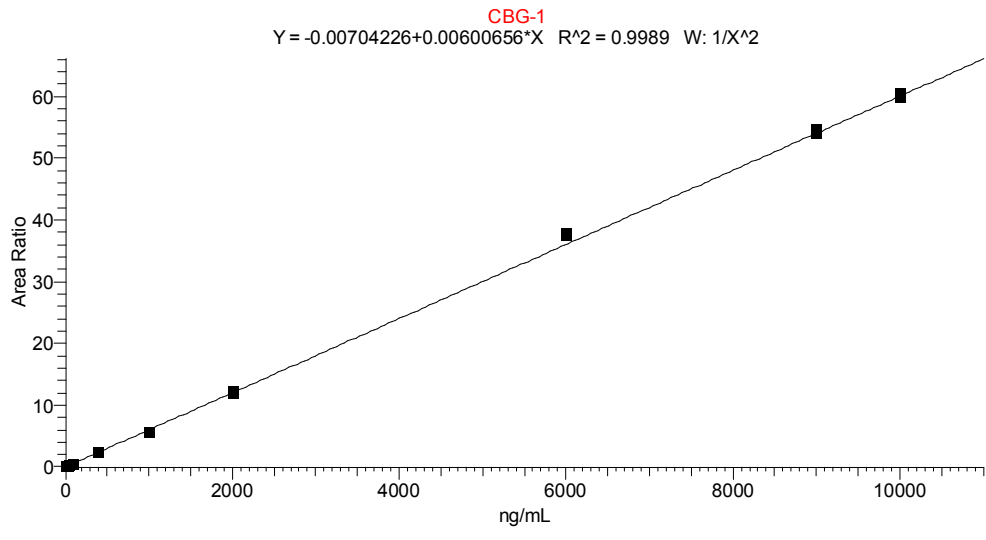


Fig. S5 CBG Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

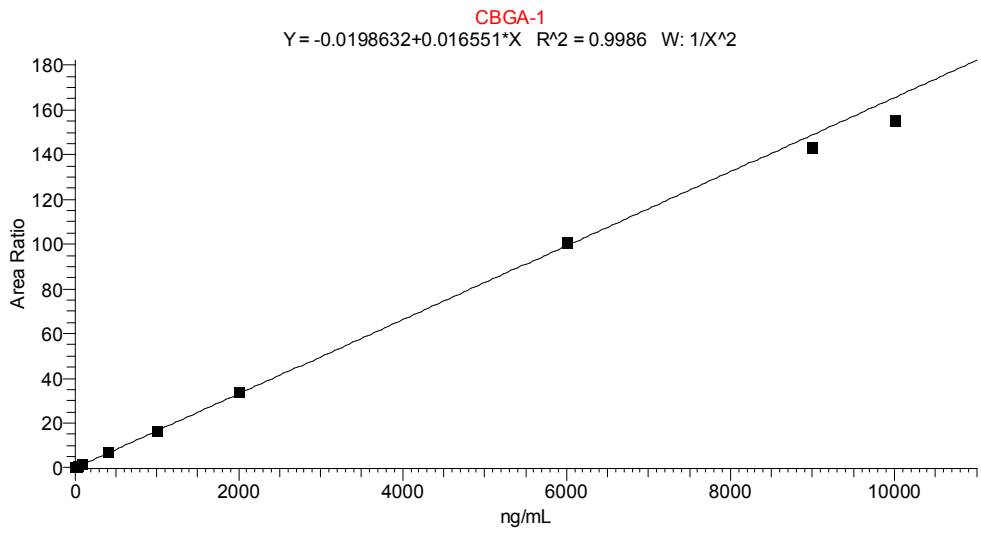


Fig. S6 CBGA Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

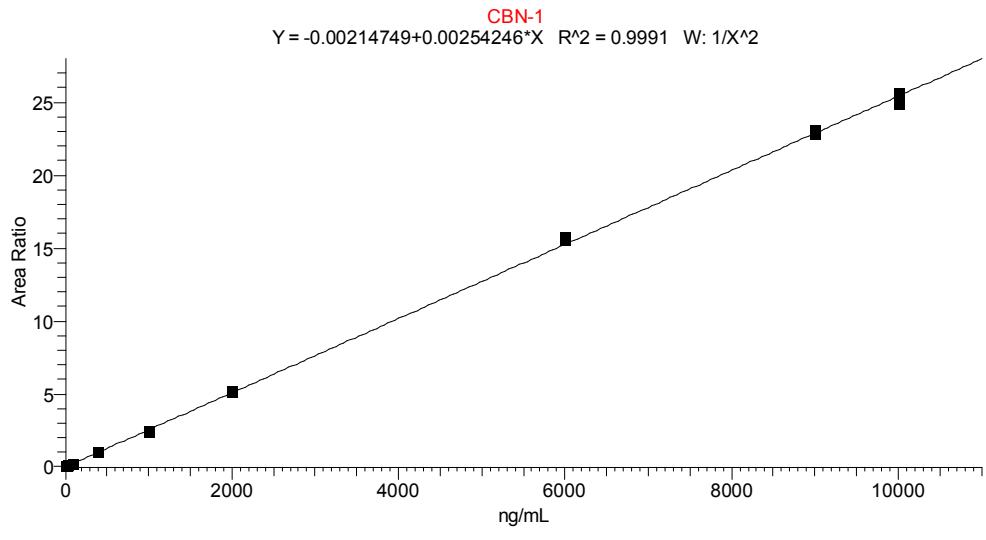


Fig. S7 CBN Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

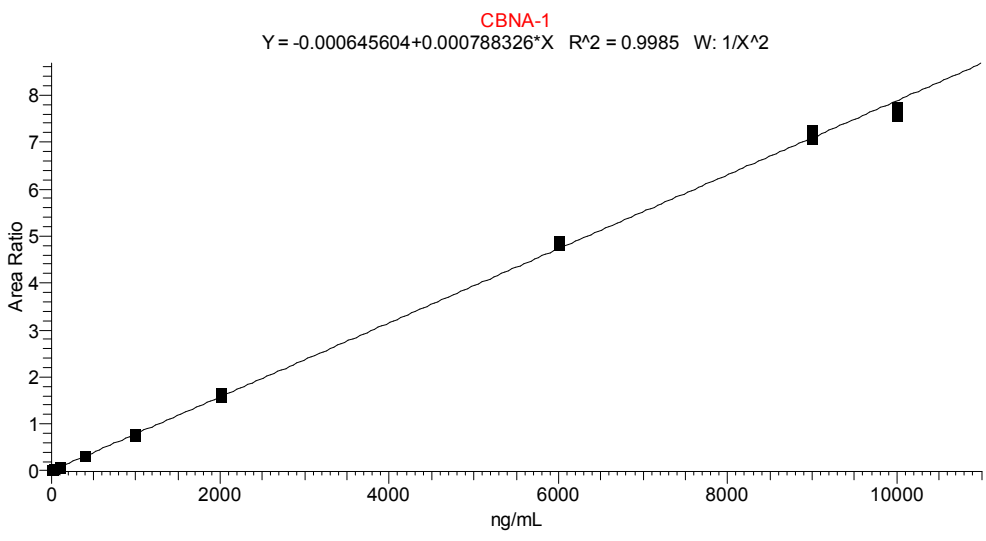


Fig. S8 CBNA Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

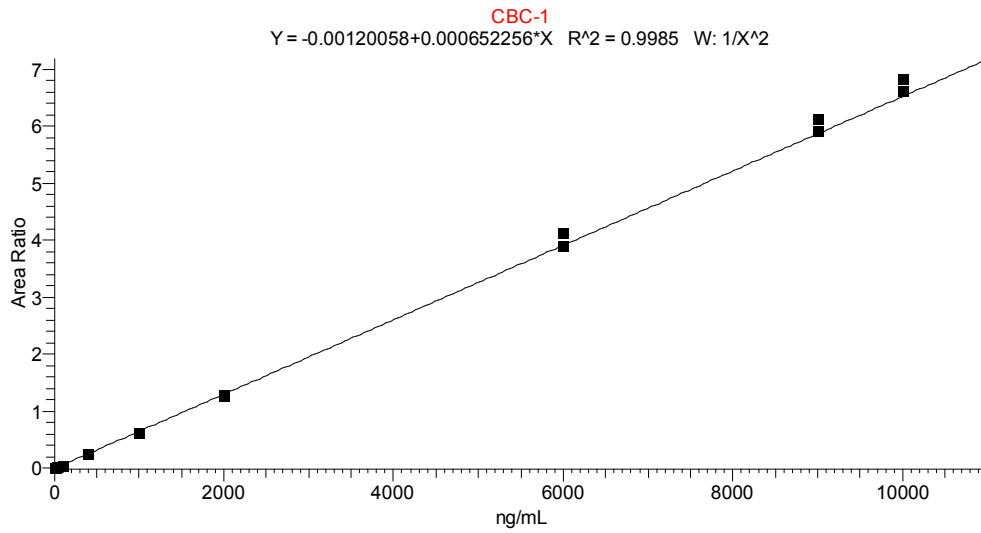


Fig. S9 CBC Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

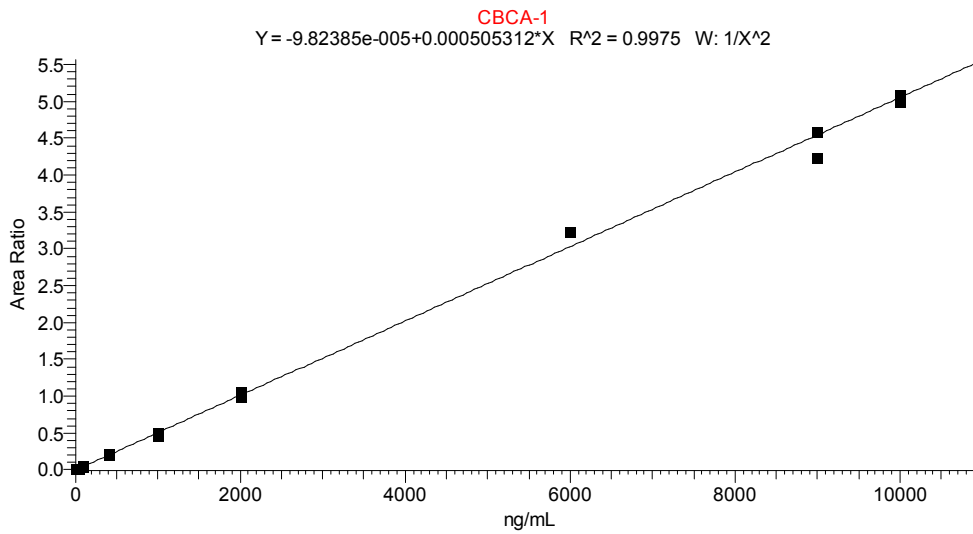


Fig. S10 CBCA Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

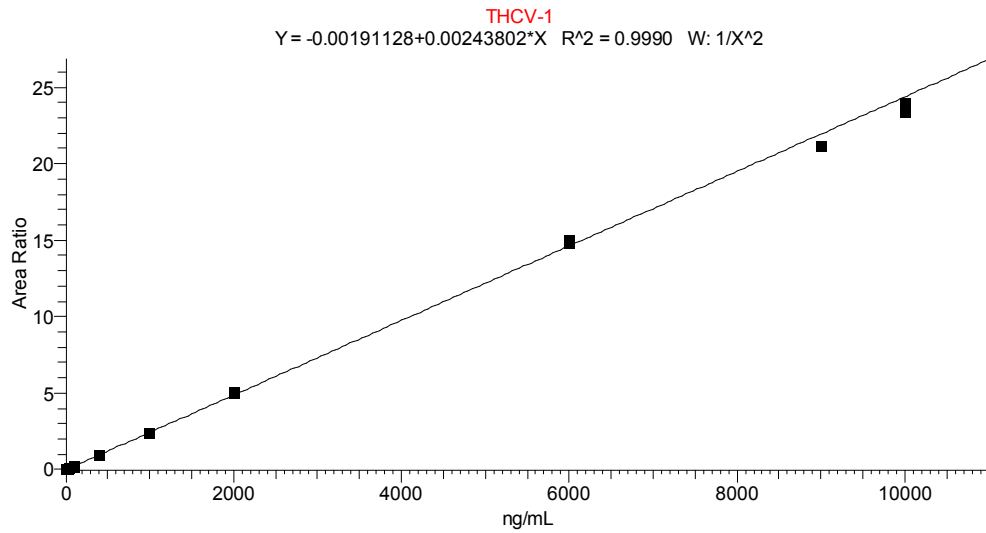


Fig. S11 THCVA Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

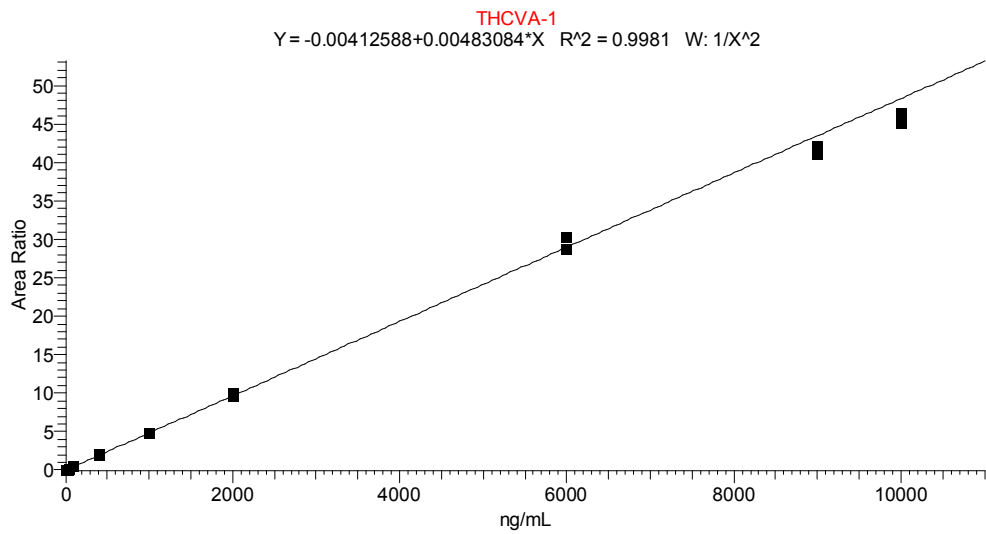


Fig. S12 THCVA Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

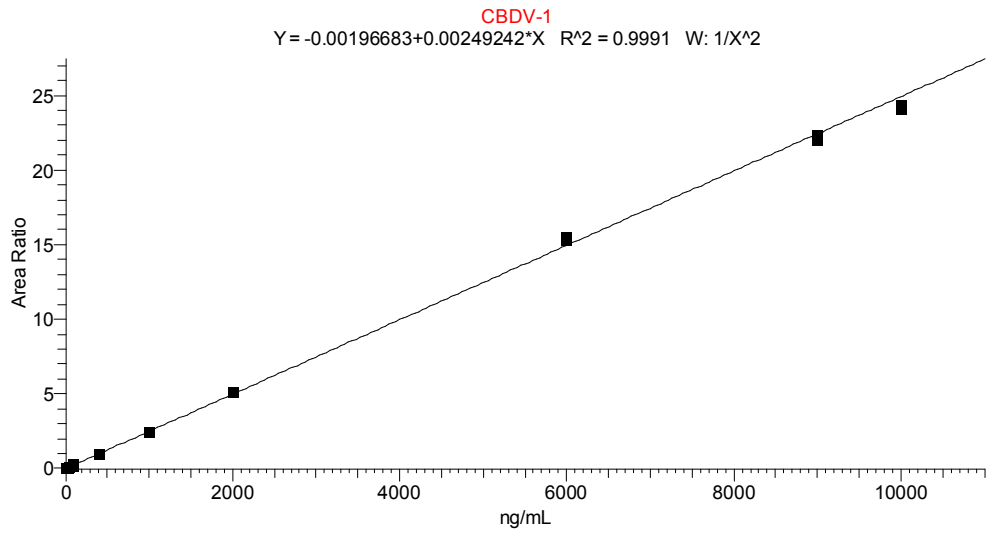


Fig. S13 CBDV Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

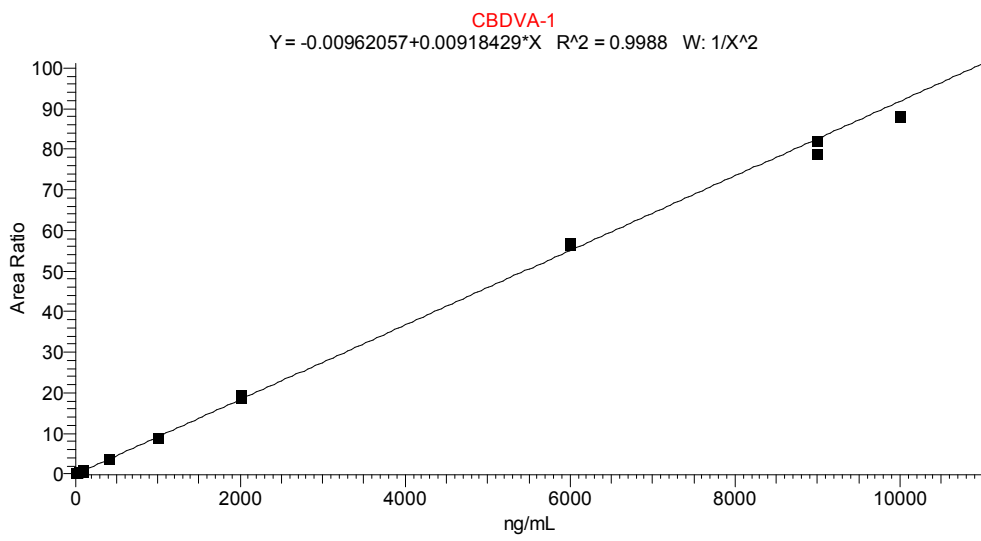


Fig. S14 CBDVA Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

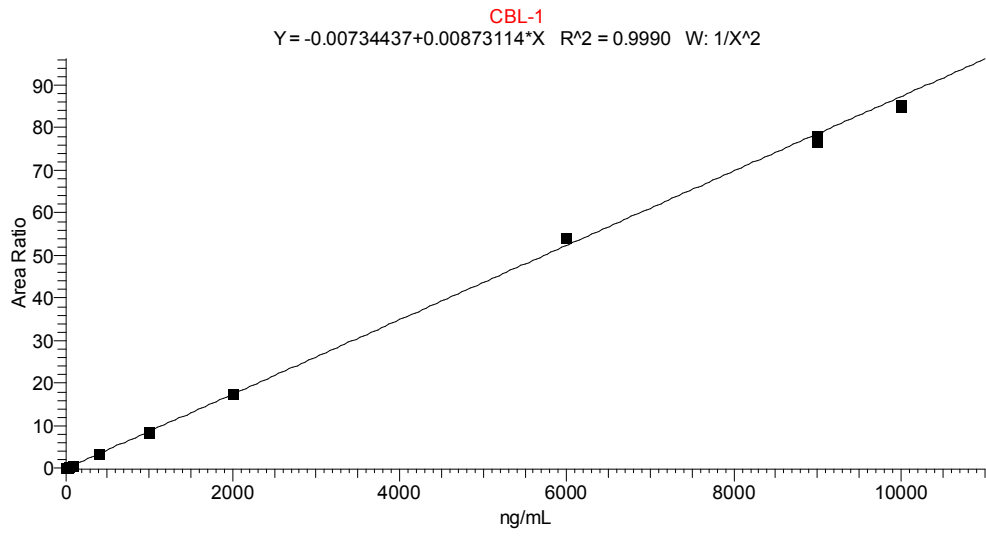


Fig. S15 CBL Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

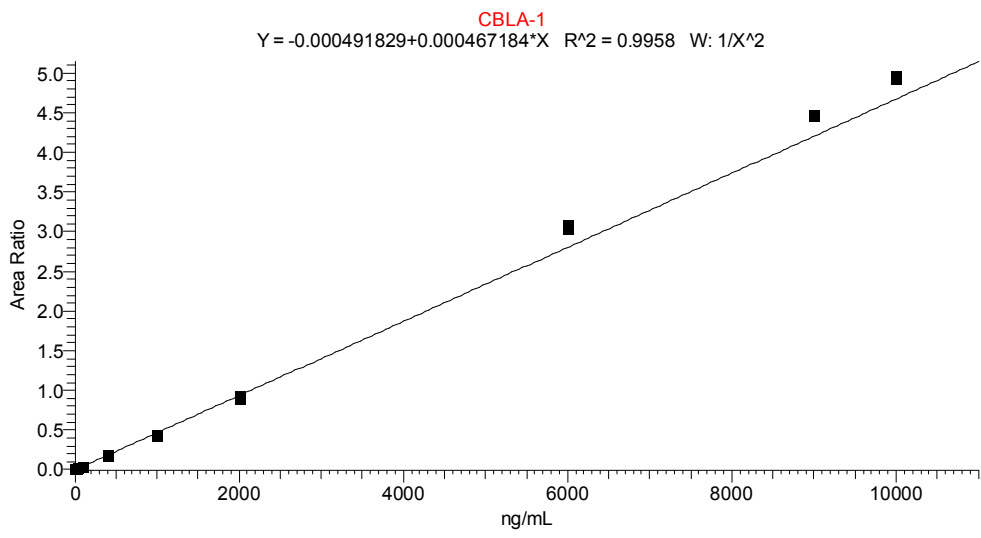


Fig. S16 CBLA Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)

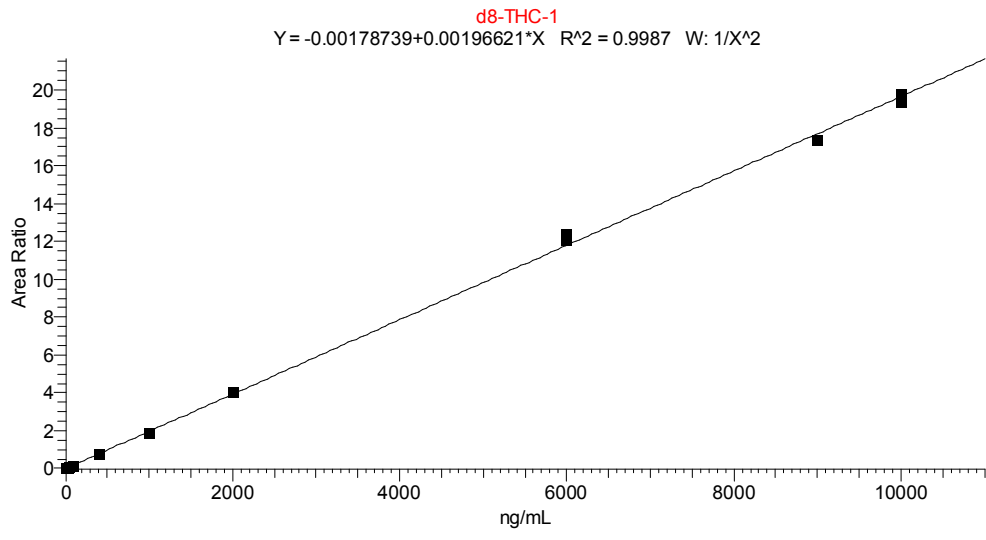


Fig. S17 Δ 8-THC Linear regression, weighted $1/x^2$ (duplicate injection of a calibration curve, beginning and end of batch)