DART-MS facilitated quantification of cannabinoids in complex edible matrices—Focus on chocolate and gelatin-based fruit candies

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Supplementary Information

This document contains the following: (1) THC and CBD calibration curves developed using semiautomated DART-HRMS capabilities and validated according to FDA guidelines; (2) tables featuring validation results for THC and CBD DART-HRMS quantification protocols; (3) DART-HR mass spectra of control and cannabinoid-infused edibles prepared in-house; (4) CBD calibration curves quantitative results developed to run alongside the extracts of CBD-infused chocolates and fruit chews; (5) example ion chromatograms demonstrating analyte signal responses in CBD-infused samples and the absence of an analyte signal for unspiked matrices; and (6) quality control (QC) results for the THC quantification experiments performed at IonSense Inc.



Figure S1. Calibration curves for THC (left) and CBD (right) quantification obtained from DART-HRMS data. All THC curves were developed with THC calibrators and THC- d_3 as the internal standard, and CBD curves were developed with CBD calibrators and CBD- d_9 as the internal standard. All quality control samples demonstrate precision and accuracy both within each run and between runs.

for each concentration.										
		Ru	n 1	Ru	n 2	Run 3				
	Conc. (mg/L)	Recalc. Conc. (mg/L)	Relative Error %	Recalc. Conc. (mg/L)	Relative Error %	Recalc. Conc. (mg/L)	Relative Error %			
LLOQ	10	11.56	-15.57	9.43	5.73	10.01	-0.08			
Point 1	25	25.09	-0.36	28.99	-15.98	21.93	12.28			
Point 2	50	45.30	9.40	49.55	0.91	54.04	-8.08			
Point 3	75	72.17	3.78	73.27	2.31	74.33	0.89			
Point 4	100	109.84	-9.84	99.04	0.96	101.26	-1.26			
Point 5	125	123.44	1.25	117.18	6.26	123.64	1.09			
ULOQ	150	147.60	1.60	157.55	-5.03	149.80	0.13			

Table S1. Results for the THC calibration curve re-calculations with the relative error percentage for each concentration.

and coeffici	and coefficient of variation for between runs and within runs. QC1 (A1-A5) and QC2 (B1-B5).										
			CalculatedBetween runsRun 1Run 2Run 3MeanRE%CV132.40128.86129.09 136.48 131.22116.95139.25124.31121.29 141.40 136.68118.65146.63123.16133.26 133.16 -2.43 6.88 126.25134.01132.97 138.61 122.30127.04139.06143.90146.27 136.66 132.73129.98146.48123.07156.00 131.15				ns				
		Conc. (mg/L)	Run 1	Run 2	Run 3	Mean	RE%	CV			
	A1		132.40	128.86	129.09						
	A2		136.48	131.22	116.95						
	A3		139.25	124.31	121.29						
High	A4	130.00	141.40	136.68	118.65						
	A5		146.63	123.16	133.26	133.16	-2.43	6 88			
ingn	B1		126.25	134.01	132.97						
	B2		138.61	122.30	127.04						
	B3		139.06	143.90	146.27						
	B4		136.66	132.73	129.98						
	B5		146.48	123.07	156.00						
		mean	138.32	130.02	131.15						
Withi	Within-run		-6.40	-0.02	-0.88						
			4.17	5.16	8.80						

Table S2. QC calculations for the THC high point including mean, relative error percentage and coefficient of variation for between runs and within runs. QC1 (A1-A5) and QC2 (B1-B5).

and coefficient of variation for between runs and within runs. QCT (AT-AS) and QC2 (BT-BS).									
			(Calculate	d	Between runs			
		Conc. (mg/L)	Run 1	Run 2	Run 3	Mean	RE%	CV	
	A1		75.96	77.59	85.86				
	A2		84.72	86.43	100.25				
	A3		89.91	89.05	84.34				
	A4	80.00	83.28	86.83	95.85				
Medium	A5		84.08	90.14	78.48	83.38	-4 22	8 88	
Wiedium	B1		78.25	92.68	79.38				
	B2		82.66	78.69	63.00				
	B3		85.35	72.77	87.96				
	B4		84.41	73.97	92.22				
	B5		80.98	76.24	79.95				
		mean	82.96	82.44	84.73				
Withi	n-run	RE%	-3.70	-3.05	-5.91				
		CV	4.44	8.44	11.77				

Table S3. QC calculations for the THC medium point including mean, relative error percentage and coefficient of variation for between runs and within runs. QC1 (A1-A5) and QC2 (B1-B5).

			(Calculate	d	Between runs			
		Conc. (mg/L)	Run 1	Run 2	Run 3	Mean	RE%	CV	
	A1		19.11	28.49	24.71				
	A2		23.26	28.65	27.02	-			
	A3		25.27	28.39	36.35				
	A4	30.00	24.42	28.25	30.79				
Low	A5		28.49	27.94	27.65	27.41	8 63	10.84	
Low	B1		27.78	27.22	33.31				
	B2		29.99	27.28	28.74				
	B3		28.77	27.31	26.70				
	B4		25.68	26.80	26.28				
	В5		26.12	27.07	24.53				
		mean	25.89	27.74	28.61				
Withi	n-run	RE%	13.70	7.54	4.64				
		CV	11.65	2.32	12.66				

Table S4. QC calculations for the THC low point including mean, relative error percentage and coefficient of variation for between runs and within runs. QC1 (A1-A5) and QC2 (B1-B5).

Table S5. QC calculations for the THC LLOQ (lower limit of quantification) point including mean, relative error percentage and coefficient of variation for between runs and within runs. QC1 (A1-A5) and QC2 (B1-B5).

			Calculated Run 1 Run 2 12.30 11.18 11.71 11.54 11.75 10.52 11.44 10.81 10.79 10.95 12.16 11.13 11.37 10.45 12.69 11.28 12.02 10.38 8.07 11.35 11.43 10.96 -14.29 -9.59		d	Be	tween rui	15
		Conc. (mg/L)	Run 1	Run 2	Run 3	Mean	RE%	CV
	A1		12.30	11.18	11.01			
	A2		11.71	11.54	12.48			
	A3		11.75	10.52	12.44			
	A4	10.00	11.44	10.81	9.10			
LLOO	A5		10.79	10.95	11.08	11.04	10.43	10.00
	B1		12.16	11.13	8.69		10.15	10.99
	B2		11.37	10.45	8.18			
	B3		12.69	11.28	12.40			
	B4		12.02	10.38	9.85			
	В5		8.07	11.35	12.18			
		mean	11.43	10.96	10.74			
Withi	n-run	RE%	-14.29	-9.59	-7.41			
			10.76	3.52	14.76			

for each c	for each concentration.										
		Ru	n 1	Ru	n 2	Run 3					
	Conc. (mg/L)	Recalc. Conc. (mg/L)	Relative Error %	Recalc. Conc. (mg/L)	Relative Error %	Recalc. Conc. (mg/L)	Relative Error %				
LLOQ	10	8.86	11.40	11.01	-10.14	11.05	-10.51				
Point 1	25	25.24	-0.98	24.67	1.33	27.27	-9.07				
Point 2	50	51.22	-2.45	51.28	-2.56	47.07	5.86				
Point 3	75	73.96	1.38	74.19	1.09	71.68	4.43				
Point 4	100	102.37	-2.37	100.56	-0.56	103.86	-3.86				
Point 5	125	123.64	1.09	117.17	6.26	121.75	2.60				
ULOQ	150	149.70	0.20	156.11	-4.08	152.33	-1.55				

Table S6. Results for the CBD calibration curve re-calculations with the relative error percentage for each concentration.

and coefficient of variation for between runs and within runs. QC1 (A1-A5) and QC2 (B1-B5).										
			CalculatedBetween runsRun 1Run 2Run 3MeanRE%CV125.32117.58129.34 $\\124.61$ 118.89117.98122.83114.67134.48 $\\125.91$ 112.13134.29124.38121.85136.33 $\\122.45$ 104.91120.88122.45104.91120.88 $\\129.50$ 133.06135.08121.78110.42137.04 $\\124.36$ 106.64161.86124.32115.74134.18 $\\$ $\\$				ns			
		Conc. (mg/L)	Run 1	Run 2	Run 3	Mean	RE%	CV		
	A1		125.32	117.58	129.34		4.04			
	A2		124.61	118.89	117.98					
	A3	130.00	122.83	114.67	134.48					
High	A4		125.91	112.13	134.29					
	A5		124.38	121.85	136.33	124.75		8 77		
mgn	B1		122.07	117.22	134.48					
	B2		122.45	104.91	120.88					
	B3		129.50	133.06	135.08					
	B4		121.78	110.42	137.04					
	B5		124.36	106.64	161.86					
•		mean	124.32	115.74	134.18					
Withi	Within-run		4.37	10.97	-3.21					
		CV	1.76	6.67	8.31					

Table S7. QC calculations for the CBD high point including mean, relative error percentage and coefficient of variation for between runs and within runs. QC1 (A1-A5) and QC2 (B1-B5).

			(Calculate	d	Between runs			
		Conc. (mg/L)	Run 1	Run 2	Run 3	Mean	RE%	CV	
	A1		77.63	81.30	62.49				
	A2		75.32	72.22	72.85	-	3.82		
	A3		76.34	65.16	67.46				
	A4	80.00	75.52	88.14	91.55				
Medium	A5		77.60	73.86	64.01	76.95		9 40	
Witculum	B1		82.46	86.50	71.44				
	B2		80.23	92.00	73.75				
	B3		79.13	85.74	71.40				
	B4		78.43	76.63	73.36				
	B5		77.24	81.87	76.77				
		mean	77.99	80.34	72.51				
Withi	n-run	RE%	2.51	-0.43	9.37				
		CV	2.67	9.80	10.53				

Table S8. QC calculations for the CBD medium point including mean, relative error percentage and coefficient of variation for between runs and within runs. QC1 (A1-A5) and QC2 (B1-B5).

			(Calculate	d	Between runs			
		Conc. (mg/L)	Run 1	Run 2	Run 3	Mean	RE%	CV	
	A1		29.30	27.20	26.18				
	A2		27.46	26.29	24.79				
	A3		28.30	27.41	24.61				
	A4	30.00	28.08	25.79	26.75				
Low	A5		28.49	26.65	25.53	27.03	9.89	4 94	
Low	B1		27.63	26.01	27.79				
	B2		28.29	28.68	26.66				
	В3		28.74	27.22	25.13				
	B4		28.51	27.26	23.98				
	B5		28.38	27.51	26.38				
		mean	28.32	27.00	25.78				
Withi	n-run	RE%	5.61	9.99	14.06				
		CV	1.76	2.98	4.31				

Table S9. QC calculations for the CBD low point including mean, relative error percentage and coefficient of variation for between runs and within runs. QC1 (A1-A5) and QC2 (B1-B5).

Table S10. QC calculations for the CBD LLOQ (lower limit of quantification) point including mean, relative error percentage and coefficient of variation for between runs and within runs. QC1 (A1-A5) and QC2 (B1-B5).

			Calculated Run 1 Run 2 H 8.70 10.52 1 8.33 11.94 1 8.03 11.50 1 9.87 11.30 1 9.08 12.09 1 8.63 11.28 1 9.39 11.58 1 10.12 10.70 1 9.14 11.75 1 10.31 11.53 1 9.16 11.42 1		d	Between runs		
		Conc. (mg/L)	Run 1	Run 2	Run 3	Mean	RE%	CV
	A1		8.70	10.52	13.15			
	A2		8.33	11.94	12.37			
	A3		8.03	11.50	11.71			
	A4	10.00	9.87	11.30	11.20			
LLOO	A5		9.08	12.09	13.26	10.76	-7 59	13 34
LLOQ	B1		8.63	11.28	11.69			
	B2		9.39	11.58	11.00			
	B3		10.12	10.70	10.12			
	B4		9.14	11.75	13.09			
	B5		10.31	11.53	9.38			
		mean	9.16	11.42	11.70			
Withi	n-run	RE%	8.38	-14.19	-16.97			
			7.94	4.15	10.66			



Figure S2. DART-HR mass spectra of control and CBD-infused fruit chews prepared in-house analyzed in positive-ion mode under soft ionization conditions (at an orifice 1 voltage of 20 V). The three control fruit chews (top) did not contain a peak at m/z 315, which confirms the absence of CBD in these samples. However, a peak at m/z 315 was detected in each of the CBD-infused fruit chews (bottom), which confirms the presence of CBD in these samples.



Figure S3. DART-HR mass spectra of control and CBD-infused chocolate prepared in-house analyzed in positiveion mode under soft ionization conditions (at an orifice 1 voltage of 20 V). The three control chocolates (top) did not contain a peak at m/z 315, which confirms the absence of CBD in these samples. However, a peak at m/z 315 was detected in each of the CBD-infused chocolates (bottom), which confirms the presence of CBD in these samples.



Figure S4. CBD calibration curve developed using DART-HRMS data that were generated using a semiautomated approach. Because all seven calibrators passed the validation requirements, and the R^2 value was >0.99, the curve was suitable for determining the CBD content in the extracts of CBD-infused chocolates, which were analyzed in the same acquisition as the curve shown here.



Figure S5. CBD calibration curve developed using DART-HRMS data that were generated using a semiautomated approach. Because all seven calibrators passed the validation requirements, and the R^2 value was >0.99, the curve was suitable for determining the CBD content in the extracts of CBD-infused fruit chews, which were analyzed in the same acquisition as the curve shown here.

Table S11. Quantitation res	sults assoc	ciated with	n the CBI) calibrat	ion curve	developed	for the			
quantification of CBD in CBD-infused chocolates.										
CBD Concentrations (mg/L)	10	25	50	75	100	125	150			
Peak Area Ratios	0.45	1.33	2.91	3.92	5.05	6.46	8.33			
Standard Deviation	0.01	0.01	0.02	0.05	0.21	0.15	0.21			
Relative Standard Deviation	1.79	0.97	0.54	1.16	4.18	2.32	2.51			

Table	S12.	Quantitation	results	associated	with	the	CBD	calibration	curve	developed	for	the
quantifi	icatio	n of CBD in C	BD-infi	ised fruit ch	ews.							

CBD Concentrations (mg/L)	10	25	50	75	100	125	150
Peak Area Ratios	0.48	1.46	2.90	4.99	5.57	7.26	8.94
Standard Deviation	0.03	0.05	0.03	0.27	0.16	0.30	0.73
Relative Standard Deviation	6.17	3.39	1.12	5.37	2.96	4.12	8.16



Figure S6. Example total ion chromatogram (TIC) (top); extracted ion chromatogram for the analyte of interest (CBD at m/z 315.2324) (middle); and extracted ion chromatogram for the internal standard (CBD- d_9) at m/z 324.2889 (bottom); which were used to determine the peak area ratios. The first five replicates represent un-spiked matrix (i.e., experimental blank extracts) for which no analyte signal (at m/z 315) was observed. However, peaks were detected at the internal standard signal (at m/z 324) for each replicate. The second five replicates represent CBD calibrators which contain both the analyte of interest (at m/z 315) and the internal standard (at m/z 324).

	Nominal			Run 1					
HIGH	Nominal					050/			
	Concentration	Analyte PA	Standard PA	PAR	Calculated C	RE%			
A1	130.00	700	149	4.69798658	116.389387	10.4697027			
A2	130.00	626	120	5.21666667	129.169023	0.639213			
A3	130.00	987	241	4.09543568	101.543277	21.889787			
A4	130.00	1192	253	4.71146245	116.721415	10.2142959			
A5	130.00	996	204	4.88235294	120.931946	6.9754262			
B1	130.00	801	177	4.52542373	112.137651	13.7402684			
B2	130.00	1923	337	5 70623145	141 231295	-8 63945730			
02	130.00	704	157	5.70023143	125 242027	3 65030303			
D3	130.00	794	157	5.03732464	123.243037	3.03920205			
84	130.00	1110	220	5.04545455	124.950568	3.8841785			
B5	130.00	894	165	5.41818182	134.134107	-3.18008266			
	mean			122.2451706					
Within-run	mean RE%	5.965253356							
CV		8.823043367							
Meets 50% crit?		TRUE							
All criteria met for level		TRUF							
MEDILIM	Nominal			Run 1					
	Concentration	Appluto DA	Standard DA	DAD	Colculated C	DE9/			
	Concentration	Analyte PA	Stanuaru PA	PAR	calculated C	RE 76			
Аб	80.00	207	64	3.2343750	80.3278055	-0.40975687			
A7	80.00	790	293	2.6962457	67.0689652	16.1637935			
A8	80.00	206	64	3.2187500	79.9428248	0.071469			
A9	80.00	409	116	3.5258621	87.5096868	-9.38710844			
A10	80.00	847	279	3.0358423	75.4362049	5.70474387			
P.6	80.00	277	125	2 6160000	65 0019005	19 625 2291			
50	80.00	327	125	2.0100000	01.00000000	14.750207			
B7	80.00	296	80	3.7000000	91.8002302	-14.7502878			
B8	80.00	334	96	3.4791667	86.3591697	-7.94896216			
B9	80.00	842	246	3.4227642	84.9694833	-6.21185415			
B10	80.00	948	271	3.4981550	86.8270184	-8.53377294			
	mean			80.53331983					
Within-run	mean RF%			-0 6666/9786	;				
····	CV CV	10.40020255							
	CV			10.49930355					
Meets 5	50% Crit?			TRUE					
All criteria r	net for level			TRUE					
				Run 1					
LOW	Nominal			Run 1					
LOW	Nominal Concentration	Analyte PA	Standard PA	Run 1 PAR	Calculated C	RE%			
LOW	Nominal Concentration	Analyte PA	Standard PA	Run 1 PAR 1 15517241	Calculated C	RE%			
LOW	Nominal Concentration 30.00	Analyte PA 201	Standard PA 174	Run 1 PAR 1.15517241	Calculated C 29.0988226 36.9159272	RE% 3.00392475			
LOW	Nominal Concentration 30.00 30.00	Analyte PA 201 187	Standard PA 174 127	Run 1 PAR 1.15517241 1.47244094	Calculated C 29.0988226 36.9159272	RE% 3.00392475 -23.0530907			
LOW A11 A12 A13	Nominal Concentration 30.00 30.00 30.00	Analyte PA 201 187 203	Standard PA 174 127 196	Run 1 PAR 1.15517241 1.47244094 1.03571429	Calculated C 29.0988226 36.9159272 26.1555219	RE% 3.00392475 -23.0530907 12.814927			
LOW A11 A12 A13 A14	Nominal Concentration 30.00 30.00 30.00 30.00	Analyte PA 201 187 203 225	Standard PA 174 127 196 203	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.10837438	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769	RE% 3.00392475 -23.0530907 12.814927 6.84741019			
LOW A11 A12 A13 A14 A15	Nominal Concentration 30.00 30.00 30.00 30.00 30.00	Analyte PA 201 187 203 225 188	Standard PA 174 127 196 203 172	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.10837438 1.09302326	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.5675441	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631			
LOW A11 A12 A13 A14 A15 B11	Nominal Concentration 30.00 30.00 30.00 30.00 30.00 30.00	Analyte PA 201 187 203 225 188 406	Standard PA 174 127 196 203 172 318	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.10837438 1.09302326 1.27672956	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.5675441 32.0938405	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946823			
LOW A11 A12 A13 A14 A15 B11 B12	Nominal Concentration 30.00 30.00 30.00 30.00 30.00 30.00 30.00	Analyte PA 201 187 203 225 188 406 243	Standard PA 174 127 196 203 172 318 195	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.10837438 1.09302326 1.27672956 1.24615385	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.5675441 32.0938405 31.3404927	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946823 -4.46830888			
LOW A11 A12 A13 A14 A15 B11 B12 B13	Nominal Concentration 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00	Analyte PA 201 187 203 225 188 406 243 388	Standard PA 174 127 196 203 172 318 195 292	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.10837438 1.09302326 1.27672956 1.24615385 1.32876712	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.5675441 32.0938405 31.3404927 33.3759817	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946823 -4.46830888 -11.2532725			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14	Nominal Concentration 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00	Analyte PA 201 187 203 225 188 406 243 388 159	Standard PA 174 127 196 203 172 318 195 292 153	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.10837438 1.09302326 1.27672956 1.24615385 1.32876712 1.03921569	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.5675441 32.0938405 31.3404927 33.3759817 26.2417921	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946823 -4.46830888 -11.2532725 -11.2532725			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B14 B15	Nominal Concentration 30.00	Analyte PA 201 187 203 225 188 406 243 388 159 204	Standard PA 174 127 196 203 172 318 195 292 153 154	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.10837438 1.09302326 1.27672956 1.24615385 1.32876712 1.03921569	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.5675441 32.0938405 31.3404927 33.3759817 26.2417921	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946822 -4.46830888 -11.2532725 12.5273598 10.9172165			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15	Nominal Concentration 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00	Analyte PA 201 187 203 225 188 406 243 388 159 204	Standard PA 174 127 196 203 172 318 195 292 153 154	Run 1 PAR 1.15517241 1.47244094 1.08371429 1.10837438 1.09302326 1.27672956 1.24615385 1.32876712 1.03921569 1.32467532	Calculated C 29.0988226 36.9159272 26.1555219 27.5675441 32.0938405 31.3404927 33.3759817 26.2417921 33.2751649	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.9794682 -4.46830888 -11.2532725 12.5273598 -10.917216			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15	Nominal Concentration 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00	Analyte PA 201 187 203 225 188 406 243 388 159 204	Standard PA 174 127 196 203 172 318 195 292 153 154	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.10837438 1.09302326 1.27672956 1.24615385 1.32876712 1.03921569 1.32467532 30.40108645	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.5675441 32.0938405 31.3404927 33.3759817 26.2417921 33.2751649	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946823 -4.46830888 -11.2532725 12.5273598 -10.9172163			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run	Nominal Concentration 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 mean mean RE%	Analyte PA 201 187 203 225 188 406 243 388 159 204	Standard PA 174 127 196 203 172 318 195 292 153 154	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.10837438 1.09302326 1.27672956 1.24615385 1.32876712 1.03921569 1.32467532 30.40108645 -1.336954848	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.5675441 32.0938405 31.3404927 33.3759817 26.2417921 33.2751649	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946823 -4.46830888 -11.2532725 12.5273598 -10.9172163			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B13 B14 B15 Within-run	Nominal Concentration 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 mean RE% CV	Analyte PA 201 187 223 225 188 406 243 388 159 204	Standard PA 174 127 196 203 172 318 195 292 153 154	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.10837438 1.09302326 1.27672956 1.24615385 1.32876712 1.03921569 1.32467532 30.40108658 1.336954848 11.12460658	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.5675441 32.0938405 31.3404927 33.3759817 26.2417921 33.2751649	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946823 -4.46830888 -11.2532725 12.5273598 -10.9172163			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run Meets 5	Nominal Concentration 30.00 <	Analyte PA 201 187 225 188 406 243 88 159 204	Standard PA 174 127 196 203 172 318 195 292 153 154	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.03571429 1.0302326 1.27672956 1.24615385 1.32876712 1.32876712 1.32467532 30.40108645 -1.336954484 1.12460588 TRUE	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.5675441 31.3404927 33.3759817 26.2417921 33.2751649	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946823 -4.46830888 -11.253273598 -10.9172163			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B13 B14 B15 Within-run Meets 5 All criteria r	Nominal Concentration 30.00 Washington Washington CV Washington CV Washington Mathematical State Test State State </td <td>Analyte PA 201 187 203 225 188 406 243 388 159 204</td> <td>Standard PA 174 127 196 203 172 318 195 292 153 154</td> <td>Run 1 PAR 1.15517241 1.47244094 1.03571429 1.10837438 1.0390236 1.27672956 1.32876712 1.03921569 1.336954844 11.12460658 11.3260548</td> <td>Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.507541 32.0938405 31.3404927 33.3759817 26.2417921 33.2751649</td> <td>RE% 3.00392475 -23.053000 12.814927 6.84741019 8.10818631 -6.9794622 -4.46830888 -11.253272 12.5273598 -10.9172163</td>	Analyte PA 201 187 203 225 188 406 243 388 159 204	Standard PA 174 127 196 203 172 318 195 292 153 154	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.10837438 1.0390236 1.27672956 1.32876712 1.03921569 1.336954844 11.12460658 11.3260548	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.507541 32.0938405 31.3404927 33.3759817 26.2417921 33.2751649	RE% 3.00392475 -23.053000 12.814927 6.84741019 8.10818631 -6.9794622 -4.46830888 -11.253272 12.5273598 -10.9172163			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B13 B14 B15 Within-run Meets 5 All criteria r	Nominal Concentration 30.00 <	Analyte PA 201 187 203 225 188 406 243 388 159 204	Standard PA 174 127 196 203 172 318 195 292 153 154	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.03571429 1.03571429 1.0357438 1.2367532 1.3267532 3.0.40108645 1.336954848 11.1246058 TRUE TRUE Run 1	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.567541 32.0938405 31.3404927 33.3759817 26.2417921 33.2751649	RE% 3.00392475 -23.0530900 12.814927 6.84741019 8.10818631 -6.9794682 -4.4683088 -11.2532725 12.5273598 -10.9172163			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B13 B14 B15 Within-run Meets 5 All criteria r	Nominal Concentration 30.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Analyte PA 201 187 203 225 188 406 243 388 159 204	Standard PA 174 127 196 203 172 318 195 292 153 154	Run 1 PAR 1.15517241 1.4724094 1.03571429 1.10837438 1.09302326 1.2767295 1.22657512 1.32876712 1.03921569 1.32467532 30.40108645 1.336954844 11.12460658 TRUE TRUE Run 1	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.567541 33.20938405 31.3404927 33.3759817 26.2417921 33.2751649	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.9794682 -4.46830888 -11.25273598 -10.9172163			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run Meets 5 All criteria r	Nominal Concentration 30.00 <	Analyte PA 201 187 203 225 188 406 243 388 406 243 388 406 243 204 406 243 204 406 244 204 406 204 406 204 406 204 406 204 406 204 406 204 204 205 205 205 205 205 205 205 205 205 205	Standard PA 174 127 196 203 172 318 195 292 153 154 Standard PA	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.03871429 1.2672956 1.24615385 1.24615385 1.2467532 30.40108645 1.33695444 11.12460658 TRUE TRUE RUN 1 PAR	Calculated C 29.0988226 36.9159272 26.1555219 27.957541 32.0938405 31.3404927 33.3759817 26.2417921 33.2751649 3 Calculated C	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946823 -4.4633088 -10.97946823 12.5273598 -10.9172163			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ	Nominal Concentration 30.00 00.00 30.00 00.01 00.02 00.02 00.01 00.02 00.02 00.01 00.02 00.02 00.02 00.02 00.02 00.02 00.02 00.02 00.02 00.02 00.02 00.02 00.02 00.02 00.02 00.02 00.02 <	Analyte PA 201 187 203 225 188 406 243 388 159 204 204 204 204 204 204 204 204 204 204	Standard PA 174 127 196 203 172 318 195 292 153 153 154 555	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.0387438 1.03902326 1.24615385 1.32876712 1.03921569 1.32467532 30.40108645 -1.336954848 T.1.12460588 TRUE TRUE RUE RUE 0.48849550 0.48849550	Calculated C 29.0988226 36.9159272 26.1555219 27.567541 32.0938404 32.0938404 26.2417921 33.3759817 26.2417921 33.2751649 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10816631 -6.9794682: -4.4633088 -11.2537259 -10.9172163 -10.9172163			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ	Nominal Concentration 30.00 0.00 0.00 0.00 0.00	Analyte PA 201 187 203 225 188 406 243 388 388 159 204 204 Analyte PA 276	Standard PA 174 127 196 203 172 203 155 292 153 154 Standard PA 555 464	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.0837438 1.0302126 1.24615385 1.32467532 30.04008645 1.336954848 11.12460658 11.3246058 11.3246058 11.3246058 11.12	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.567541 30.393405 31.3404927 33.3759817 26.2417921 33.2751649 Calculated C 12.6727289	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946822 12.5273598 -10.9172163 -10.9172163 -0.9172163			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ A16 A17	Nominal Concentration 30.00 0.00 0.00 10.00	Analyte PA 201 187 203 225 188 406 243 388 159 204 204 204 204 204 204 204 204 204 204	Standard PA 174 127 196 203 172 318 195 292 153 154 154 Standard PA Standard PA	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.03371429 1.03921562 1.24615385 1.32876712 1.03921569 1.32467532 30.40108645 1.33695484 11.12460658 TRUE TRUE RUN 1 PAR 0.48849558 0.42241379	Calculated C 29.0988226 36.9159272 26.1555219 27.957541 32.0938405 31.3404927 33.3759817 26.2417921 33.2751649 3 Calculated C 12.6727289 11.0445555	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946823 -4.46830888 -11.2527358 -10.9172163 -0.917216			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ A16 A17 A18	Nominal Concentration 30.00 0.00 10.00 10.00	Analyte PA 201 187 225 188 406 243 388 159 204 204 204 204 204 204 204 204 204 204	Standard PA 174 127 196 203 172 203 195 292 153 154 154 Standard PA 565 464 174	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.10837438 1.09302326 1.27672956 1.32876712 1.324615385 1.32876712 1.03921569 1.32467532 30.40108645 1.13460558 1.1246058 RUE RUE RUE RUE RUE Q.48849558 0.43241379 0.43103448	Calculated C 29.0988226 36.9159272 26.1555219 27.567541 33.3759817 33.3759817 26.2417921 33.3751649 3 Calculated C 12.6727298 11.044555 11.2569586	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946822 12.5273598 -10.9172163 -10.9172163 -26.7272893 -10.4455544 -26.5695861			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ A16 A17 A18 A19	Nominal Concentration 30.00 00% crit? net for level Nominal Concentration 10.00 10.00	Analyte PA 201 187 203 225 188 406 243 388 406 243 243 243 249 204 204 204 204 204 204 204 205 204 205 205 205 205 205 205 205 205 205 205	Standard PA 174 127 196 203 172 318 195 292 153 154 533 154 Standard PA 565 464 174 174 164	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.03871429 1.24615385 1.24615385 1.24615385 1.24615385 1.32876712 1.32876712 1.32876712 1.32876712 1.3265744 1.3265741 TRUE TRUE Run 1 PAR 0.48849558 0.42241379 0.4302448 0.38414634	Calculated C 29.0988226 36.9159272 26.1555219 27.957541 32.0938405 31.3404927 33.3759817 26.2417921 33.3759817 26.2417921 33.2751649 3 Calculated C 12.6727289 11.045555 11.2569586 10.1016927	RE% 3.00392475 -2.3.0530907 12.814927 6.84741019 8.10818631 -6.97946822 -4.4683088 -10.97946822 11.2532725 12.5273598 -10.9172162 -0.9172162 -0.9172162 -12.5697860 -10.101692732 -1.01692732			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ A16 A17 A18 A19 A20	Nominal Concentration 30.00 0.00 10.00 10.00 10.00 10.00	Analyte PA 201 187 203 225 188 406 243 388 204 204 204 204 204 204 204 204 204 204	Standard PA 174 127 196 203 172 318 195 292 153 318 195 292 153 318 154 S55 464 174 174 149	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.03871429 1.0387438 1.0392156 1.24615385 1.32876712 1.03921569 1.32467532 30.40108645 1.336954484 11.12460658 TRUE TRUE TRUE PAR 0.48849558 0.42241379 0.43103448 0.38547315	Calculated C 29.0988226 36.9159272 26.1555219 27.5457541 33.3759817 26.2417921 33.3759817 26.2417921 33.2751649 3 5 6 6 7 7 10.45555 11.2569586 10.1016927 10.3930908	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946822 -4.4683088 -11.2527259 -10.9172163 -10.9172163 -10.9172163 -10.9172163 -10.455547 -10.10592732 -3.93090793 -3.93090793			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ A16 A17 A18 A19 A20 B16	Nominal Concentration 30.00 000 000 10.00 10.00 10.00 10.00 10.00	Analyte PA 201 187 203 225 188 406 243 388 388 159 204 204 204 204 204 204 204 205 204 204 205 204 205 205 205 205 205 205 205 205 205 205	Standard PA 174 127 196 203 172 292 153 154 154 Standard PA 565 464 464 174 164 149 570	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.00302326 1.27672956 1.24615385 1.3267532 3.04008645 1.336954848 11.12460582 13.0400845 1.336954848 11.12460582 1.3460582 1.040849558 0.42241379 0.4839558 0.42241379 0.43304488 0.34514044 0.34551404 0.34	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.567541 30.33405 31.3404927 33.3759817 26.2417921 33.3759817 26.2417921 33.2751649 3 Calculated C 12.6672789 11.0445555 11.2569536 0.0106927 10.3930908 9.15230431	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946822 -4.46830888 -10.53272 12.5273598 -10.9172163 -10.9172163 -0.9172163 -0.9172163 -10.9172163 -10.4455547 -10.455547 -10.455547 -10.459733 -3.93090793 8.47695688 8.47695688 8.47695688 -3.9769793 -3.93090797 -3.93090797 -3.93090797 -3.9			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ A16 A17 A18 A19 A20 B17	Nominal Concentration 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 mean RE% CV j0% crit? net for level Nominal Concentration 10.00 10.00 10.00 10.00 10.00 10.00	Analyte PA 201 187 203 225 406 243 388 159 204 204 204 204 204 204 204 205 204 204 205 204 205 204 205 204 205 205 205 205 205 205 205 205 205 205	Standard PA 174 127 196 203 318 195 292 153 154 154 Standard PA 565 464 174 164 149 570 721	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.03871429 1.0387488 1.24615385 1.24615385 1.32876712 1.03921569 1.32467532 30.40108645 1.33695484 11.12460658 TRUE TRUE TRUE Run 1 PAR 0.48849558 Ru1 0.42241379 0.43103448 0.38414634 0.39597315 0.34561404 0.35090153	Calculated C 29.0988226 36.9159272 26.1555219 27.457769 27.557541 32.0938405 31.3404927 33.3759817 26.2417921 33.2751649 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946823 -4.4633088 -10.52725 12.5273598 -10.9172163 -10.9172163 -0.9172163 -10.9172163 -10.5272893 -10.455543 -10.16159273 -3.93090793 8.47695688 7.17418455			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ A16 A17 A18 A19 A20 B16 B17 B18	Nominal Concentration 30.00 mean RE% CV 00% crt? met for level Nominal Concentration 10.00 10.00 10.00 10.00 10.00 10.00	Analyte PA 201 225 188 406 243 388 159 204 204 204 276 159 204 276 159 204 276 159 204 276 159 204 276 196 75 39 197 253 267	Standard PA 174 127 196 203 172 292 153 154 154 565 464 174 164 174 164 149 570 721	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.10837438 1.0392156 1.24615385 1.32876712 1.03921569 1.32467532 30.40108645 1.336954484 1.12460588 TRUE RUN 1 PAR 0.48849558 0.48849558 0.48849558 0.48849558 0.34561404 0.3597315 0.34561404 0.35997315 0.4090153 0.4090155 0.4090155 0.4090155 0.4090155 0.4090155 0.4090155 0.4090155 0.4090155 0.4090155 0.409	Calculated C 29.0988226 36.9159272 26.1555219 27.567541 33.3759817 26.2417921 33.3759817 26.2417921 33.2751649 3 2 2.62417921 3 2.62472789 11.0445555 11.2569586 10.1016927 10.393008 9.15230431 9.28258155 10.66550794	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10816631 11.253272 12.5273598 -10.9172163 -10.9172163 -26.727289 -10.4455544 -12.5695861 -1.0169273 -3.93090793 8.47695688 7.17418433 -6.5507914			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ A16 A17 A18 A19 A20 B16 B17 B18 B19 B	Nominal Concentration 30.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00	Analyte PA 201 187 203 225 185 406 243 388 406 243 243 204 204 204 204 204 204 204 204 205 205 205 205 205 205 205 205 205 205	Standard PA 174 127 196 203 172 318 195 292 153 154 154 565 464 154 565 464 174 164 174 164 174 164 174 166 565	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.03871429 1.0387438 1.24615385 1.24615385 1.24615385 1.24615385 1.24615385 0.40108645 1.32656742 1.33695484 1.12460658 TRUE Run 1 PAR 0.48849558 0.42241379 0.4302448 0.38414634 0.39597315 0.4370422 0.4302448 0.3859135 0.4370422 0.4302448 0.4302448 0.4302448 0.4302448 0.4302448 0.4302448 0.4302448 0.4302448 0.430248 0.4304 0.430248 0.4304 0.430248 0.4304 0.440 0.	Calculated C 29.0988226 36.9155219 27.9457769 27.567541 32.0938405 31.3404927 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 27.2417921 33.2751649 33.27517 27.2417921 33.27517 27.2417921 33.27517 27.2417921 33.27517 27.2417921 33.27517 27.2417921 33.27517 27.2417921 33.27517 27.2417921 33.27517 27.2417921 27.24177 27.24177 27.24177 27.241777 27.241777 27.2417777 27.24177777 27.2417777777777777777777777777777777777	RE% 3.00392475 -2.3.0530907 12.814927 6.84741019 8.10818631 -6.97946822 -4.4683088 -10.53272 12.5273598 -10.9172163 -10.9172163 -10.9172163 -10.9172163 -10.10592735 -3.93090793 8.47695688 -4.7695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 -3.9309079 -3.93090793 -3.93090793 -3.9309079 -3.93090793 -3.93090793 -3.9309079 -3.9309079 -3.93090793 -3.9309079 -3.9309 -3.9309079 -3.9309079 -3.9309079 -3.9309079 -3.9309079 -3.9309079 -3.9309079 -3.9309079 -3.9309079 -3.9309079 -3.9309079 -3.9309079 -3.9309 -3.930907 -3.93			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ A16 A17 A18 A19 A20 B16 B17 B18 B19 B19 B22 C	Nominal Concentration 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 mean RE% CV 50% crit? net for level Nominal Concentration 10.00 10.0	Analyte PA 201 187 203 225 188 406 243 388 159 204 204 204 204 204 204 204 204 204 204	Standard PA 174 127 196 203 172 318 195 292 292 338 195 292 293 318 195 292 493 494 195 295 292 495 494 195 292 495 494 195 292 495 494 494 555 464 174 174 195 495 292 195 195 195 195 195 195 195 195 195 195	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.03871429 1.0382145 1.24615385 1.32876712 1.03921569 1.32467532 30.40108645 1.336954444 11.12460658 TRUE TRUE RUE PAR 0.48849558 0.42241379 0.43103448 0.385416444 0.38597315 0.34561404 0.35090153 0.34501434 0.35090153 0.34501454 0.35090153 0.34501454 0.35090153 0.34501454 0.35090153 0.3450153 0.34501454 0.35090153 0.34501454 0.35090153 0.34501454 0.35090153 0.34501454 0.35090153 0.34501454 0.35090153 0.34501454 0.35090153 0.34501454 0.35090153 0.34501454 0.35090153 0.34501454 0.35090153 0.34501454 0.35090153 0.3450155 0.35090153 0.35090155 0.35090	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.957541 32.0938405 31.3404927 33.3759817 26.2417921 33.2751649 3 3 2 5 2 6.2417921 1.0445555 11.2569586 10.1016927 10.3930908 9.15230431 9.28258155 10.66650791 10.16650791	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946823 -4.4683088 -11.2527259 -12.527359 -10.9172163 -12.527359 -10.9172163 -10.527373 -10.1059273 -3.93090793 8.47695688 7.1714718453 -6.65079111 -1.92792119			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ A16 A17 A18 A19 A20 B16 B17 B18 B19 B20 B	Nominal Concentration 30.00 00% crit? met for level Nominal Concentration 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00	Analyte PA 201 187 203 225 188 406 243 348 406 243 249 204 204 204 204 204 204 204 204 205 204 205 205 205 205 205 205 205 205 205 205	Standard PA 174 127 196 203 172 292 153 154 154 154 154 154 154 154 154 154 154	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.0387438 1.03921262 1.24615385 1.24615385 1.32467532 30.40108645 1.32467532 30.40108645 1.32467532 30.40108645 1.32467532 0.40241394 4.3403448 0.3456144 0.35090153 0.4070122 0.3878437 0.50147929	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.567541 31.3404927 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 27.27289 11.045555 11.2569586 0.0105927 10.393908 9.15230431 9.28258155 10.6650791 10.1927912 12.9926316	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946822 12.5273598 -10.9172163 -10.532722 -10.9172163 -0.9172163 -0.9172163 -10.4455547 -10.455547 -1.2559786 -1.0169273 -3.93090793 8.47695688 7.17418453 -6.55079112 -1.92791199 -1.9279119 -1.9			
LOW A11 A12 A13 A14 A15 B12 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ A16 A17 A18 A19 A20 B16 B17 B18 B19 B20	Nominal Concentration 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 mean RE% CV 50% crit? net for level Nominal Concentration 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00	Analyte PA 201 187 203 406 243 388 159 204 204 204 204 204 205 204 205 205 206 205 205 205 205 205 205 205 205 205 205	Standard PA 174 127 196 203 172 318 195 292 153 154 154 154 154 565 464 174 164 149 570 721 149 570 721 149 570 721 149 570 721 149 570 565	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.03871429 1.0387488 1.24615385 1.24615385 1.32876712 1.03921569 1.32467532 30.40108645 1.33695484 11.12460658 TRUE TRUE TRUE Run 1 PAR 0.48849558 Ru1 0.3484634 0.349597315 0.345161404 0.35909135 0.34561404 0.35909135 0.3406122 0.3878437 0.50147329 10.77544143	Calculated C 29.0988226 36.9159227 26.1555219 27.457769 27.567541 32.0938405 31.3404927 33.3759817 26.2417921 33.2751649 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	RE% 3.00392475 -23.053090 12.814927 6.84741019 8.10818631 -6.9794682 -4.4633088 -10.917216 -11.253272 -10.917216 -10.917216 -0			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ A16 A17 A18 A19 A20 B16 B17 B18 B19 B20 Within-run	Nominal Concentration 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 mean RE% CV 00% crit? net for level Nominal Concentration 10.00 </td <td>Analyte PA 201 225 188 406 243 388 204 204 204 204 204 204 204 205 204 205 204 205 204 205 205 205 205 205 205 205 205 205 205</td> <td>Standard PA 174 127 196 203 172 318 195 292 153 154 154 154 565 464 174 164 174 164 174 164 570 721 691 691 676</td> <td>Run 1 PAR 1.15517241 1.03571429 1.03571429 1.0387438 1.03902326 1.24615385 1.32876712 1.03921569 1.32467532 30.40108645 1.336954484 1.13460548 Run 1 PAR 0.48849558 Run 1 PAR 0.48849558 0.348241379 0.43103448 0.34954135 0.34561404 0.35090153 0.34561404 0.35090153 0.34561404 0.35090153 0.34561404 0.35090153 0.34561404 0.35090153 0.34561404 0.35090153 0.34561404 0.35090153 0.4070122 0.3878437 0.50147929 10.77541433 7.57441433</td> <td>Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.5675441 32.0938405 31.3404927 33.3759817 26.2417921 33.3759817 26.2417921 33.37591649 3 3 Calculated C 12.6727289 11.045555 10.1569586 10.1016927 10.33930908 9.15230431 9.2828155 10.6650791 10.1927912 12.9926316</td> <td>RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946822 12.5273598 -10.9172163 -10.532726 -26.7272893 -3.9309275 -3.9309275 -3.930975 -3.930975 -3.930975 -3.93075 -3.93075 -3.93075 -3.93075 -3.93075</td>	Analyte PA 201 225 188 406 243 388 204 204 204 204 204 204 204 205 204 205 204 205 204 205 205 205 205 205 205 205 205 205 205	Standard PA 174 127 196 203 172 318 195 292 153 154 154 154 565 464 174 164 174 164 174 164 570 721 691 691 676	Run 1 PAR 1.15517241 1.03571429 1.03571429 1.0387438 1.03902326 1.24615385 1.32876712 1.03921569 1.32467532 30.40108645 1.336954484 1.13460548 Run 1 PAR 0.48849558 Run 1 PAR 0.48849558 0.348241379 0.43103448 0.34954135 0.34561404 0.35090153 0.34561404 0.35090153 0.34561404 0.35090153 0.34561404 0.35090153 0.34561404 0.35090153 0.34561404 0.35090153 0.34561404 0.35090153 0.4070122 0.3878437 0.50147929 10.77541433 7.57441433	Calculated C 29.0988226 36.9159272 26.1555219 27.9457769 27.5675441 32.0938405 31.3404927 33.3759817 26.2417921 33.3759817 26.2417921 33.37591649 3 3 Calculated C 12.6727289 11.045555 10.1569586 10.1016927 10.33930908 9.15230431 9.2828155 10.6650791 10.1927912 12.9926316	RE% 3.00392475 -23.0530907 12.814927 6.84741019 8.10818631 -6.97946822 12.5273598 -10.9172163 -10.532726 -26.7272893 -3.9309275 -3.9309275 -3.930975 -3.930975 -3.930975 -3.93075 -3.93075 -3.93075 -3.93075 -3.93075			
LOW A11 A12 A13 A14 A15 B11 B12 B13 B14 B15 Within-run Meets 5 All criteria r LLOQ A16 A17 A18 A19 A20 B16 B17 B18 B19 B20 Within-run	Nominal Concentration 30.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 <	Analyte PA 201 187 203 225 406 243 388 406 243 243 243 244 204 204 204 204 204 204 204 204 205 205 205 205 205 205 205 205 205 205	Standard PA 174 127 196 203 172 318 195 292 153 154 154 154 154 154 154 154 154	Run 1 PAR 1.15517241 1.47244094 1.03571429 1.03871429 1.03871429 1.0387482 1.2467532 30.40108645 1.32467532 30.40108645 1.324667532 30.40108645 1.324667532 30.40108645 1.324667532 30.40108645 1.3246948 0.40104 Run 1 PAR 0.48849558 0.42241379 0.43103448 0.34814634 0.348949538 0.42241379 0.34814634 0.348949538 0.4309484 0.348949538 0.42241379 0.35049132 0.3690413 0.45044434 0.36997315 0.45044434 1.12269021 1.2269 1.226 1.2269 1.2269 1.2269 1.2269 1.2269 1.226 1.2269 1.2269 1.226 1.2269 1.2269 1.226 1.2269	Calculated C 29.0988226 26.1555219 27.94557769 27.567541 32.0938405 31.3404927 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 33.3759817 26.2417921 10.1927912 12.9926316 5	RE% 3.00392475 -2.3.0530907 12.814927 6.84741019 8.10818631 -6.97946822 -4.4683088 -10.97946822 11.2532725 12.5273598 -10.9172163 -10.9172163 -10.9172163 -1.25697866 -1.01692735 -3.93090793 8.47695688 -4.7695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 8.47695688 -1.01692735 -3.93090793 -3.930			
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Figure S7. Quality control (QC) standard results for the quantification experiments performed. These QC standards were run alongside the calibration curve featured in Figure 4. Greater than 50% of the QC standards at each level were within an acceptable percentage of their theoretical concentrations. Greater than 67% of the QC standards overall passed validation. The replicates highlighted in red were outside the acceptable percentage range for that respective QC level. These results indicate that: (1) the calibration curve overall passed validation; and (2) the curve can be used to determine the unknown THC content in the edibles extracts that were analyzed alongside the curve.