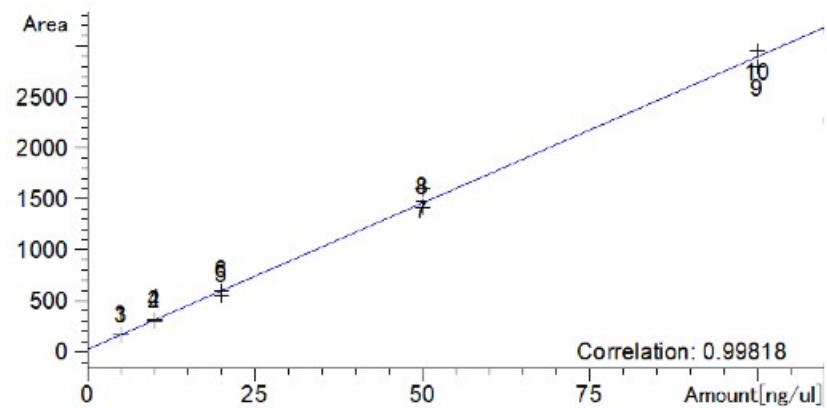
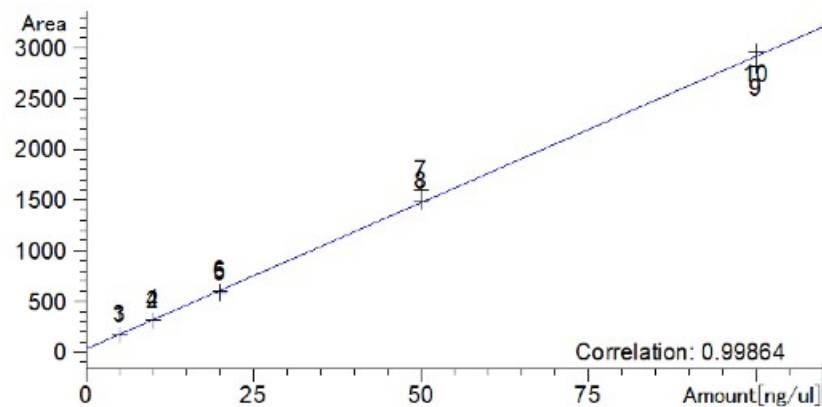


Electronic Supplementary Information

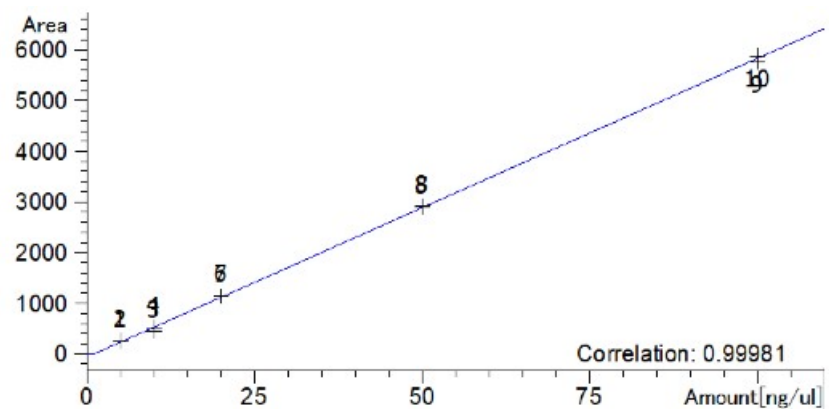
Figure S1



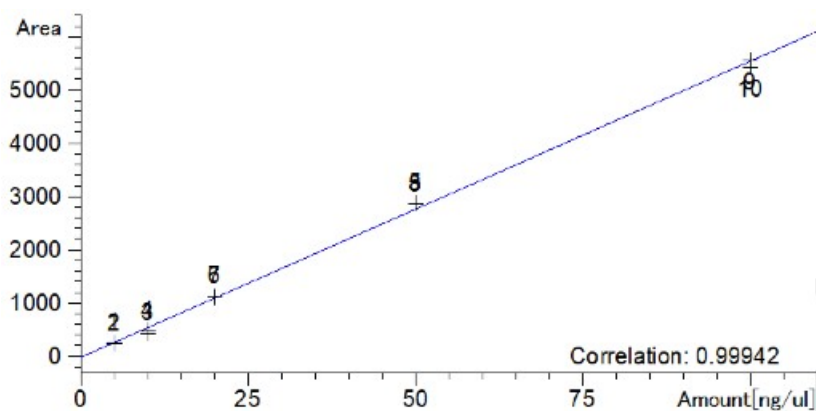
HPLC-UV calibration curve of CBDA (1)



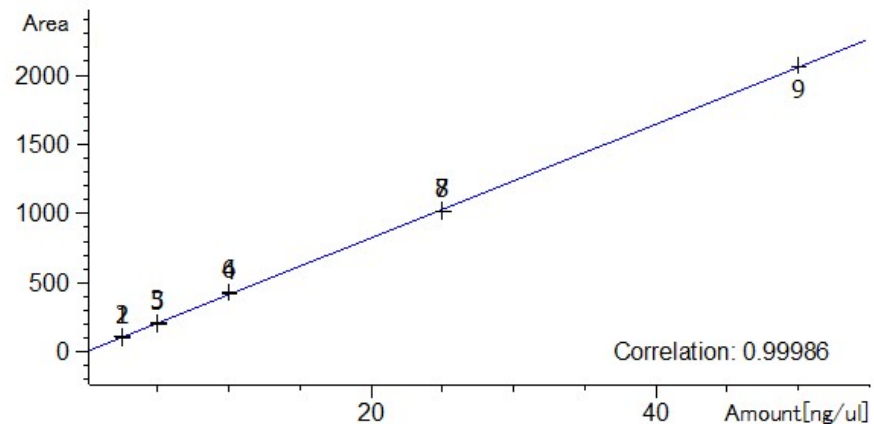
HPLC-UV calibration curve of CBGA (2)



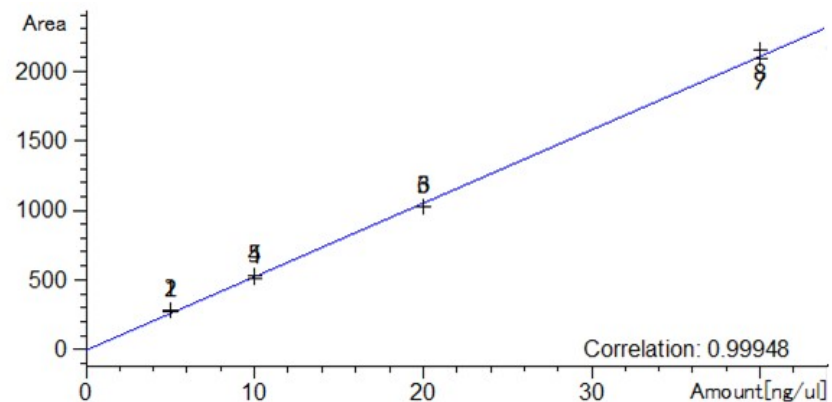
HPLC-UV calibration curve of CBG (3)



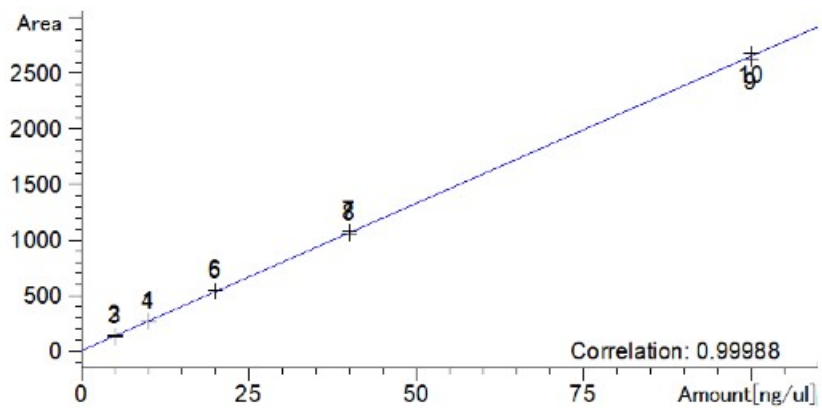
HPLC-UV calibration curve of CBD (4)



HPLC-UV calibration curve of CBN (5)



HPLC-UV calibration curve of Δ^9 -THC (6)



HPLC-UV calibration curve of Δ^9 -THCA (7)

Table S1: Content of cannabinoids in *Cannabis sativa* L. samples, as determined by HPLC analysis

Sample	Cannabinoids concentration in the extracts (µM)							Cannabinoids content in the plant material (mg/g)							% Δ ⁹ -THC
	CBD	CBDA	CBG	CBGA	CBN	Δ ⁹ -THC	Δ ⁹ -THCA	CBD	CBDA	CBG	CBGA	CBN	Δ ⁹ -THC	Δ ⁹ -THCA	
FC1-A	276.16	903.97	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	8.60	32.07	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	0.00
FC1-B	291.11	931.28	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	9.10	33.20	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	0.00
FC2-A	565.14	1316.08	<LOQ	123.45	<LOQ	58.65	<LOD	17.60	46.83	<LOQ	4.41	<LOQ	1.83	<LOD	0.18
FC2-B	529.51	1330.00	<LOQ	115.99	<LOQ	56.15	<LOD	16.52	47.30	<LOQ	4.15	<LOQ	1.75	<LOD	0.18
FC3-A	591.25	545.62	<LOQ	<LOQ	<LOQ	50.45	<LOD	18.45	19.41	<LOQ	<LOQ	<LOQ	1.57	<LOD	0.16
FC3-B	655.83	597.68	<LOQ	<LOQ	<LOQ	53.00	<LOD	20.46	21.26	<LOQ	<LOQ	<LOQ	1.65	<LOD	0.17
FC4-A	274.89	265.90	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	8.50	9.38	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	0.00
FC4-B	267.93	261.38	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	8.40	9.34	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	0.00
FC5-A	113.95	406.15	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	3.58	14.54	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	0.00
FC5-B	109.26	345.29	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	3.39	12.23	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	0.00
FC6-A	370.67	834.92	<LOQ	<LOQ	<LOQ	80.83	<LOD	11.67	29.96	<LOQ	<LOQ	<LOQ	2.54	<LOD	0.25
FC6-B	385.27	790.89	<LOQ	<LOQ	<LOQ	83.21	<LOD	11.94	32.40	<LOQ	<LOQ	<LOQ	2.58	<LOD	0.26
FC7-A	573.09	647.13	<LOQ	<LOQ	<LOQ	79.30	<LOD	18.02	23.20	<LOQ	<LOQ	<LOQ	2.49	<LOD	0.25
FC7-B	502.75	618.19	<LOQ	<LOQ	<LOQ	59.33	<LOD	15.77	22.10	<LOQ	<LOQ	<LOQ	1.86	<LOD	0.19
FC8-A	583.89	628.03	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	18.22	22.35	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	0.00
FC8-B	601.71	824.39	<LOQ	<LOQ	<LOQ	58.49	<LOD	18.68	29.18	<LOQ	<LOQ	<LOQ	1.82	<LOD	0.18
FC9-A	777.61	3013.32	<LOQ	<LOQ	<LOD	93.37	48.15	24.31	107.38	<LOQ	<LOQ	<LOD	2.92	1.72	0.44
FC9-B	792.21	3118.52	<LOQ	<LOQ	<LOD	103.10	47.95	24.66	110.65	<LOQ	<LOQ	<LOD	3.21	1.70	0.47
FC10-A	638.12	1621.00	<LOQ	<LOQ	<LOD	65.55	<LOQ	20.05	58.07	<LOQ	<LOQ	<LOD	2.06	<LOQ	0.21
FC10-B	616.15	1548.10	<LOQ	<LOQ	<LOD	67.39	<LOQ	19.35	55.41	<LOQ	<LOQ	<LOD	2.12	<LOQ	0.21
FC11-A	636.59	1846.32	<LOQ	<LOQ	<LOD	81.16	<LOQ	19.85	65.64	<LOQ	<LOQ	<LOD	2.53	<LOQ	0.25
FC11-B	659.09	1878.38	<LOQ	<LOQ	<LOD	84.32	<LOQ	20.71	67.29	<LOQ	<LOQ	<LOD	2.65	<LOQ	0.26
FC12-A	806.93	1087.57	<LOQ	<LOQ	<LOD	68.52	<LOQ	25.15	38.65	<LOQ	<LOQ	<LOD	2.14	<LOQ	0.21
FC12-B	784.73	1008.06	<LOQ	<LOQ	<LOD	66.71	<LOQ	24.54	35.94	<LOQ	<LOQ	<LOD	2.09	<LOQ	0.21
FC13-A	851.78	2902.41	<LOQ	53.76	<LOD	103.29	59.16	26.19	101.73	<LOQ	1.89	<LOD	3.18	2.07	0.50
FC13-B	881.24	3018.27	<LOQ	52.54	<LOD	113.37	60.93	27.62	107.86	<LOQ	1.89	<LOD	3.55	2.18	0.55
FC14-A	883.07	2539.37	<LOQ	<LOQ	<LOD	107.20	<LOQ	27.63	90.62	<LOQ	<LOQ	<LOD	3.35	<LOQ	0.34
FC14-B	913.09	2571.12	<LOQ	<LOQ	<LOD	106.63	<LOQ	28.41	91.19	<LOQ	<LOQ	<LOD	3.32	<LOQ	0.33

FC15-A	187.52	1678.83	<LOQ	<LOQ	<LOD	<LOQ	48.49	5.84	59.64	<LOQ	<LOQ	<LOD	<LOQ	1.72	0.15
FC15-B	193.39	1807.13	<LOQ	<LOQ	<LOD	<LOQ	55.47	6.05	64.50	<LOQ	<LOQ	<LOD	<LOQ	1.98	0.17
FC16-A	573.33	1546.56	<LOQ	<LOQ	<LOD	<LOQ	<LOQ	17.87	54.96	<LOQ	<LOQ	<LOD	<LOQ	<LOQ	0.00
FC16-B	565.05	1098.35	<LOQ	<LOQ	<LOD	<LOQ	<LOQ	17.81	52.86	<LOQ	<LOQ	<LOD	<LOQ	<LOQ	0.00
FC17-A	297.52	1422.43	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	9.36	50.99	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	0.00
FC17-B	288.85	1378.76	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	9.08	49.43	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	0.00
RC1-A	<LOQ	104.90	<LOQ	108.50	<LOQ	477.07	3137.49	<LOQ	3.76	<LOQ	3.91	<LOQ	15.00	112.48	11.36
RC1-B	<LOQ	100.89	<LOQ	108.32	<LOQ	572.23	3175.24	<LOQ	3.62	<LOQ	3.90	<LOQ	18.00	113.83	11.78
RC2-A	<LOQ	<LOQ	<LOQ	<LOQ	252.96	861.19	1311.28	<LOQ	<LOQ	<LOQ	<LOQ	7.85	27.08	47.01	6.83
RC2-B	125.26	<LOQ	159.68	<LOQ	369.88	973.83	805.80	3.94	<LOQ	5.05	<LOQ	11.48	30.63	28.89	5.60
RC3-A	<LOQ	<LOQ	<LOD	<LOD	<LOQ	125.06	3251.27	<LOQ	<LOQ	<LOD	<LOD	<LOQ	3.93	116.56	10.62
RC3-B	<LOQ	<LOQ	<LOD	<LOD	<LOQ	125.57	4274.46	<LOQ	<LOQ	<LOD	<LOD	<LOQ	3.95	153.24	13.83
RC4-A	<LOQ	<LOQ	<LOD	<LOD	<LOQ	<LOQ	146.65	<LOQ	<LOQ	<LOD	<LOD	<LOQ	<LOQ	5.26	0.46
RC4-B	<LOQ	<LOQ	<LOD	<LOD	<LOQ	<LOQ	233.82	<LOQ	<LOQ	<LOD	<LOD	<LOQ	<LOQ	8.38	0.74
RC5-A	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	210.83	5259.08	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	6.63	188.54	17.20
RC5-B	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	188.70	5277.30	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	5.93	189.19	17.19
RC6-A	<LOQ	1945.38	<LOQ	<LOQ	<LOD	148.28	2235.30	<LOQ	69.74	<LOQ	<LOQ	<LOD	4.66	80.14	7.49
RC6-B	<LOQ	185.98	<LOQ	<LOQ	<LOD	146.43	2537.13	<LOQ	6.67	<LOQ	<LOQ	<LOD	4.61	90.96	8.44
RC7-A	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	441.59	2745.49	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	13.89	98.43	10.02
RC7-B	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	382.26	2859.62	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	12.02	102.52	10.19
RC8-A	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	156.58	3543.33	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	4.92	127.03	11.63
RC8-B	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	314.52	5734.07	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	9.89	205.57	19.02
RC9-A	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	148.62	4557.99	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	4.67	163.40	14.80
RC9-B	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	181.91	5086.63	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	5.72	182.36	16.56
RC10-A	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	364.60	5251.98	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	11.47	188.28	17.66
RC10-B	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	222.97	4853.69	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	7.01	174.00	15.96
RC11-A	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	282.41	5423.97	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	8.88	194.45	17.94
RC11-B	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	203.74	3418.25	<LOQ	<LOQ	<LOQ	<LOQ	<LOD	6.41	122.54	11.39
RC12-A	303.62	2626.70	<LOQ	<LOQ	<LOD	<LOQ	233.12	9.55	94.17	<LOQ	<LOQ	<LOD	<LOQ	8.36	0.73
RC12-B	363.43	2527.81	<LOQ	<LOQ	<LOD	<LOQ	238.81	11.43	90.62	<LOQ	<LOQ	<LOD	<LOQ	8.56	0.75
RC13-A	432.14	4457.00	<LOQ	<LOQ	<LOD	<LOQ	212.40	13.59	159.78	<LOQ	<LOQ	<LOD	<LOQ	7.61	0.67
RC13-B	472.84	3447.20	<LOQ	<LOQ	<LOD	<LOQ	176.83	14.87	123.58	<LOQ	<LOQ	<LOD	<LOQ	6.34	0.56

RC14-A	<LOQ	<LOQ	<LOD	<LOD	<LOD	14.46	427.40	<LOQ	<LOQ	<LOD	<LOD	<LOD	0.45	15.32	1.39
RC14-B	<LOQ	<LOQ	<LOD	<LOD	<LOD	14.25	543.79	<LOQ	<LOQ	<LOD	<LOD	<LOD	0.45	19.49	1.75
RC15-A	<LOQ	<LOQ	<LOD	<LOD	<LOD	<LOQ	1053.58	<LOQ	<LOQ	<LOD	<LOD	<LOD	<LOQ	37.77	3.31
RC15-B	<LOQ	<LOQ	<LOD	<LOD	<LOD	<LOQ	959.71	<LOQ	<LOQ	<LOD	<LOD	<LOD	<LOQ	34.41	3.02
RC16-A	963.61	2318.51	<LOD	<LOD	<LOQ	93.89	<LOQ	30.31	83.12	<LOD	<LOD	<LOQ	2.95	<LOQ	0.30
RC16-B	978.98	2085.10	<LOD	<LOD	<LOQ	86.55	<LOQ	30.79	74.75	<LOD	<LOD	<LOQ	2.72	<LOQ	0.27
RC17-A	1955.24	1964.71	147.31	<LOQ	<LOD	135.48	<LOQ	61.49	70.43	4.66	<LOQ	<LOD	4.26	<LOQ	0.43
RC17-B	1715.66	2160.51	118.24	<LOQ	<LOD	122.10	<LOQ	53.96	77.45	3.74	<LOQ	<LOD	3.84	<LOQ	0.38
RC18-A	2070.88	1473.81	174.81	<LOQ	<LOQ	118.79	<LOQ	65.13	52.84	5.53	<LOQ	<LOQ	3.74	<LOQ	0.37
RC18-B	2139.66	1954.08	170.79	<LOQ	<LOQ	147.64	<LOQ	67.29	70.05	5.41	<LOQ	<LOQ	4.64	<LOQ	0.46
RC19-A	1160.26	1635.34	<LOQ	<LOQ	<LOQ	196.07	289.34	36.49	58.63	<LOQ	<LOQ	<LOQ	6.17	10.37	1.53
RC19-B	943.47	1251.27	<LOQ	<LOQ	<LOQ	183.51	295.20	29.67	44.86	<LOQ	<LOQ	<LOQ	5.77	10.58	1.51
RC20-A	1933.29	2410.66	205.20	174.91	<LOQ	145.61	<LOQ	60.80	86.42	6.49	6.31	<LOQ	4.58	<LOQ	0.46
RC20-B	1941.20	2410.96	177.44	146.85	<LOQ	158.44	<LOQ	61.05	86.43	5.62	5.29	<LOQ	4.98	<LOQ	0.50
RC21-A	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	984.30	4806.40	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	30.96	172.31	18.21
RC21-B	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	982.87	4799.00	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	30.91	172.04	18.18

Table S2. Electrochemical and chromatographic Δ^9 -THCA values determined for RC samples.

sample	SPE-CB			SPE-PEDOT	
	THCA _{HPLC} (μM)	THCA _{ELECTRO} (μM)	R _{SPE-CB}	THCA _{ELECTRO} (μM)	R _{SPE-PEDOT}
RC1_A	3137	2710	0.86	3520	1.12
RC1_B	3175	2795	0.88	2439	0.77
RC2_A	1311	1399	1.07	3759	2.87
RC2_B	806	882	1.09	1938	2.41
RC3_A	3251	2934	0.90	3943	1.21
RC3_B	4274	3623	0.85	4532	1.06
RC4_A	147	139	0.95	189	1.29
RC4_B	234	206	0.88	341	1.46
RC5_A	5259	4950	0.94	5284	1.00
RC5_B	5277	4995	0.95	5901	1.12
RC6_B	2537	3493	1.38	2863	1.13
RC7_A	2745	2942	1.07	3024	1.10
RC7_B	2860	3175	1.11	2971	1.04
RC8_A	3543	3625	1.02	2973	0.84
RC8_B	5734	5322	0.93	5742	1.00
RC9_A	4558	4213	0.92	4837	1.06
RC9_B	5087	4552	0.89	4880	0.96
RC10_A	5252	4932	0.94	5671	1.08
RC10_B	4854	5011	1.03	4530	0.93
RC11_A	5424	4851	0.89	5515	1.02
RC11_B	3418	3949	1.16	3965	1.16
RC14_A	427	507	1.19	481	1.13
RC14_B	544	608	1.12	589	1.08
RC15_A	1054	1377	1.31	1321	1.25
RC15_B	960	1451	1.51	1133	1.18
RC21_A	4806	5174	1.08	5045	1.05
RC21_B	4799	5252	1.09	4928	1.03

Table S3. Electrochemical and chromatographic CBDA values determined for FC and RC samples.

sample	SPE-CB			SPE-PEDOT	
	CBDA _{HPLC} (μM)	CBDA _{ELECTRO} (μM)	R _{SPE-CB}	CBDA _{ELECTRO} (μM)	R _{SPE-PEDOT}
FC1-A	904	1871	2.07		
FC1-B	931	1081	1.16		
FC2-A	1316	1434	1.09	2455	1.87
FC2-B	1330	1537	1.16	2577	1.94
FC3-A	546	1050	1.92	3011	5.52
FC3-B	598	1093	1.83	2566	4.29
FC4-A	266	648	2.44		
FC4-B	261	391	1.50		
FC5-A	406	493	1.21	929	2.29
FC5-B	345	394	1.14	976	2.83
FC6-A	835	1480	1.77	2068	2.48
FC6-B	791	1199	1.52	1910	2.42
FC7-A	647	994	1.54	2453	3.79
FC7-B	618	1243	2.01	1180	1.91
FC8-A	628	1458	2.32		
FC8-B	824	1293	1.57		
FC9-A	3013	3349	1.11	4671	1.55
FC9-B	3119	3554	1.14	4109	1.32
FC10-A	1621	1949	1.20		
FC10-B	1548	1736	1.12		
FC11-A	1846	2042	1.11		
FC11-B	1878	2698	1.44		
FC12-A	1088	1593	1.46	3104	2.85
FC12-B	1008	1514	1.50	2874	2.85
FC13-A	2902	3372	1.16	4889	1.68
FC13-B	3018	3066	1.02	5582	1.85

FC14-A	2539	3789	1.49		
FC14-B	2571	2882	1.12		
FC15-A	1679	1827	1.09	2617	1.56
FC15-B	1807	1887	1.04	2810	1.56
FC16-A	1547	1144	0.74	2946	1.90
FC16-B	1098	2631	2.40	3143	2.86
FC17-A	1422	1626	1.14	2759	1.94
FC17-B	1379	1246	0.90	2973	2.16
RC6-A	1945	2999	1.54	3793	1.95
RC12-A	2627	2855	1.09	8319	3.17
RC12-B	2528	2589	1.02	7742	3.06
RC13-A	4457	3885	0.87	10964	2.46
RC13-B	3447	3555	1.03	11998	3.48
RC16-A	2319	5565	2.40	3792	1.64
RC16-B	2085	3745	1.80	4002	1.92
RC17-A	1965	3895	1.98	7239	3.68
RC17-B	2161	4657	2.16	10112	4.68
RC18-A	1474	3656	2.48	3422	2.32
RC18-B	1954	3753	1.92	4599	2.35
RC19-A	1635	2546	1.56	5728	3.50
RC19-B	1251	2254	1.80	5798	4.63
RC20-A	2411	5130	2.13	10368	4.30
RC20-B	2411	4357	1.81	11547	4.79
