



Supplementary Information

Effect of the Incorporation of Sugarcane Bagasse Biochar in Leaching and Bioavailability of Clomazone in Soil

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Table S1. Experimental design matrix and the value of responses based on experiment run

Run	Replicate	Independent variable			Response ^d
		X ₁ ^a	X ₂ ^b	X ₃ ^c	
1	1	1.00	2.20	1	175567
2	1	3.00	2.20	1	182133
3	1	1.00	8.00	1	220779
4	1	3.00	8.00	1	154346
5	1	1.00	2.20	1	530540
6	1	3.00	2.20	1	492734
7	1	1.00	8.00	1	602770
8	1	3.00	8.00	1	505461
9	2	1.00	2.20	2	207340
10	2	3.00	2.20	2	151354
11	2	1.00	8.00	2	199606
12	2	3.00	8.00	2	176620
13	2	1.00	2.20	2	477188
14	2	3.00	2.20	2	469506
15	2	1.00	8.00	2	564035
16	2	3.00	8.00	2	553057
17	3	1.00	2.20	3	135790
18	3	3.00	2.20	3	166743
19	3	1.00	8.00	3	163539
20	3	3.00	8.00	3	172838
21	3	1.00	2.20	3	601825
22	3	3.00	2.20	3	506315
23	3	1.00	8.00	3	488951
24	3	3.00	8.00	3	508523

^aVortex agitation time; ^bpH of aqueous solution; ^cvolume of extraction mixture; ^dclomazone peak area.

Table S2. Statistical analyses of variance (ANOVA) for linear model of CMZ extraction from biochar-amended soil samples using SLE / LTP

Source	Sum of square	Degree of freedom	Mean square	F-value	<i>p</i> -value
time ^a (1)	4.49×10^9	1	4.49×10^9	3.32	0.09
pH ^b (2)	1.90×10^9	1	1.90×10^9	1.40	0.25
Volume ^c (3)	7.33×10^{11}	1	7.33×10^{11}	542.10	9.08×10^{-14} significant
1 by 2	3.66×10^6	1	3.66×10^6	0.003	0.96
1 by 3	7.16×10^8	1	7.16×10^8	0.53	0.48
2 by 3	2.40×10^8	1	2.40×10^8	0.18	0.68
1 \times 2 \times 3	5.41×10^8	1	1.86×10^2	9.20	0.54
Pure error	2.16×10^{10}	16	2.02×1001	–	–
Total	7.62×10^{11}	23	–	–	–

^aVortex agitation time; ^bpH of aqueous solution; ^cvolume of extraction mixture. Coefficient of determination (R^2) = 0.972; adjusted R^2 = 0.959.

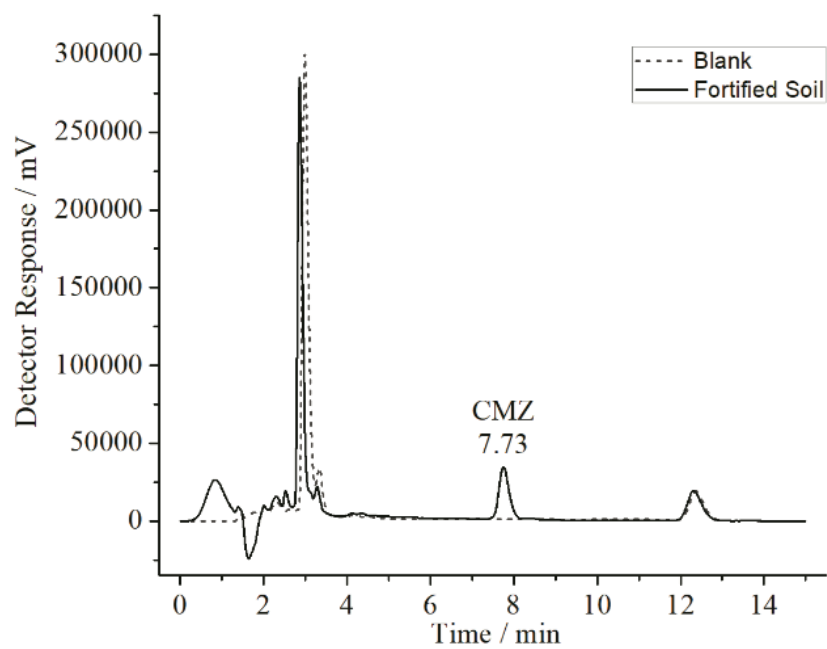


Figure S1. Chromatograms of extracts obtained with application of SLE / LTP-HPLC-UV-Vis method in biochar-amended soil samples in the absence of CMZ (blank) and fortified at 2.5 mg kg^{-1} of herbicide (fortified soil).

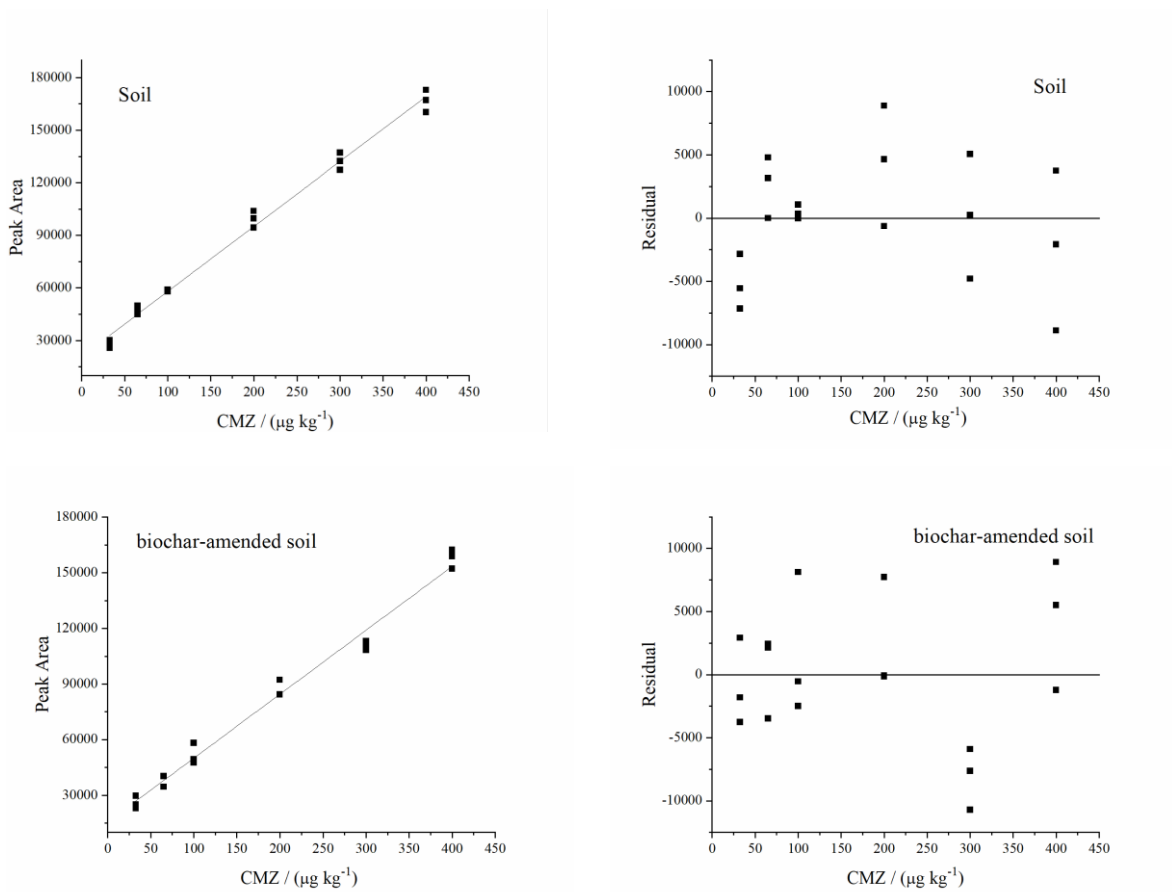


Figure S2. Calibration curves (32.5 to $400 \mu\text{g kg}^{-1}$) from SLE / LTP-HPLC-UV-Vis method employed for CMZ determination in soil and biochar-amended soil samples, and their residual plots.