Supplementary Materials

Table S1. Chemical elements concentrations in leachates obtained from soil pots growing *S. oleracea L.*

S. oleracea L.						
Values in mg L^{-1}						
Soil media	**WEEK 1**	**WEEK 2**	**WEEK 5**	**WEEK 7**	**WEEK 9**	**WEEK 11**
Al	14	7.38	8.22	6.22	3.14	1.28
Ca	25.78	23.30	4.74	109.90	3.26	1.05
K	29.44	27.45	9.30	48.88	7.52	0.69
Mg	15.22	8.85	2.39	60.79	2.45	0.33
Na	21.26	17.78	2.16	85.59	2.47	0.29
P	0.01	0.02	0.05	< 0.1	0.08	0.01
Si	14.65	16.13	11.25	167.90	32.96	0.95
Sr	0.14	0.37	0.03	0.75	0.03	0.01
Values in μg L^{-1}						
Li	<0.680	73.41	1.06	10.75	4.66	1.37
Be	0.01	0.11	0.07	1.34	0.42	<0.039
B	91.45	180.82	27.81	587.25	49.49	86.59
Ti	75.33	99.20	127.72	840.48	422.86	12.64
V	5.72	13.43	9.14	70.40	27.65	1.38
Cr	3.89	14.08	6.53	47.96	19.78	0.62
Mn	13.46	10.23	14.72	86.73	32.47	4.07
Fe	1997.88	3110.97	3564.41	39260.00	11790.00	297.21
Co	1.18	1.58	1.13	7.24	2.57	0.08
Ni	11.81	8.84	7.47	52.09	18.47	0.92
Cu	9.76	7.15	6.10	30.19	10.43	1.44
Zn	4.79	5.02	6.24	27.98	10.79	0.74
As	1.01	1.39	0.72	2.92	1.10	0.15
Se	1.48	1.84	0.66	2.06	<0.456	<0.456
Mo	0.22	14.16	0.24	0.52	0.21	0.21
Cd	0.03	0.03	0.00	0.03	0.02	0.01
Sb	0.12	0.34	0.09	0.22	0.11	0.04
Ba	136.54	92.90	54.80	402.76	133.97	5.50
Hg	0.01	0.01	<0.004	<0.003	0.00	0.00
Pb	0.40	0.49	0.55	6.56	1.70	0.05

Table S2. Chemical elements concentrations in leachates obtained from CFA pots growing *S. oleracea L.*

S. oleracea L.						
Values in mg L^{-1}						
CFA media	**WEEK 1**	**WEEK 2**	**WEEK 5**	**WEEK 7**	**WEEK 9**	**WEEK 11**
Al	0.28	2.45	0.91	0.42	0.30	0.27
Ca	116.70	124.40	154.90	147.70	96.80	71.71
K	66.39	64.01	31.97	8.86	7.55	6.24
Mg	4.40	4.96	8.66	46.05	32.10	24.12
Na	60.37	50.95	16.64	9.53	7.95	6.42
P	0.03	< 0.005	< 0.005	0.03	0.03	0.03
Si	1.65	0.76	1.89	1.92	1.87	1.89
Sr	3.33	3.53	4.39	3.06	1.95	1.54
Values in μg L^{-1}						
Li	711.93	595.96	302.86	346.20	260.15	226.12
Be	0.01	0.00	0.01	<0.039	<0.039	<0.039
B	1377.09	1550.94	1492.71	6382.09	4936.09	4277.50
Ti	0.22	0.08	0.26	0.08	<0.070	<0.070
V	68.47	81.70	64.09	25.84	25.43	24.68
Cr	74.64	78.00	64.76	29.15	18.70	13.16
Mn	3.26	0.87	4.96	1.29	0.83	0.24
Fe	5.53	1.17	18	1.04	0.96	0.65
Co	0.51	0.50	0.37	0.31	0.25	0.21
Ni	1.13	0.82	1.08	0.67	0.39	0.45
Cu	0.89	1.15	3.09	0.72	0.56	0.69
Zn	0.69	0.74	2.24	<0.181	<0.181	<0.181
As	9.63	8.17	4.34	5.90	5.95	5.47
Se	5.71	9.84	8.48	13.11	9.70	8.79
Mo	126.45	122.56	109.19	73.12	47.39	32.61
Cd	0.02	0.03	0.03	0.04	0.03	0.04
Sb	3.78	4.53	17	9.85	8.94	8.55
Ba	132.43	108.06	143.88	69.18	65.46	63.00
Hg	0.01	0.01	0.02	0.02	0.01	0.01
Pb	0.04	0.02	0.06	0.01	0.01	0.00

CFA: Coal-fly-ash.

Table S3. Chemical elements concentrations in leachates obtained from CFA + soil pots growing *S. oleracea L.*

S. oleracea L.						
Values in mg L^{-1}						
CFA + soil media	**WEEK 1**	**WEEK 2**	**WEEK 5**	**WEEK 7**	**WEEK 9**	**WEEK 11**
Al	0.03	0.03	0.03	0.03	0.02	0.02
Ca	235.30	226.10	135.20	68.88	50.29	6.27
K	42.39	37.46	25.42	3.46	7.04	0.52
Mg	25.77	21.71	18.55	23.72	15.71	1.40
Na	32.15	31.00	8.37	7.99	6.06	0.41
P	0.05	0.04	0.08	0.13	0.37	0.06
Si	14	5.05	3.05	4.69	3.60	0.60
Sr	3.66	3.42	2.23	1.70	1.11	0.13
Values in μg L^{-1}						
Li	25.32	20.34	52.78	35.08	19.00	3.20
Be	0.00	0.01	0.00	<0.039	<0.039	<0.039
B	2155.13	1762.79	1591.22	3110.40	1809.38	177.83
Ti	0.18	0.17	0.48	0.41	0.34	1.26
V	15.36	12.41	13.67	31.27	22.91	4.85
Cr	25.62	34.31	11.95	8.75	3.60	0.41
Mn	0.40	1.18	136.78	0.12	0.17	0.67
Fe	1.87	14	8.44	7.14	6.63	22.36
Co	1.54	1.45	1.99	1.25	0.70	0.07
Ni	1.65	2.01	2.24	1.19	0.95	0.38
Cu	2.57	2.46	2.21	2.47	2.72	1.03
Zn	0.63	0.58	0.50	<0.181	<0.181	<0.181
As	10.16	8.18	7.76	9.63	6.95	1.33
Se	5.05	5	3.11	1.54	0.75	<0.456
Mo	132.64	121.16	86.08	40.06	18.36	1.16
Cd	0.03	0.04	0.02	0.02	0.01	0.00
Sb	6.00	4.66	4.00	6.72	4.38	0.32
Ba	205.63	237.13	170.99	96.47	70.92	10.63
Hg	0.01	0.02	0.01	0.02	0.01	0.00
Pb	0.03	0.03	0.03	0.00	0.01	0.03

CFA: Coal-fly-ash.

Table S4. Chemical elements concentrations in leachates obtained from soil pots growing *B. juncea*.

B. juncea						
Values in mg L^{-1}						
Soil media	**WEEK 1**	**WEEK 2**	**WEEK 5**	**WEEK 7**	**WEEK 9**	**WEEK 11**
Al	1.79	2.64	0.89	0.67	0.52	0.32
Ca	29.50	30.88	5.73	110.40	3.32	0.99
K	28.49	25.39	11.45	48.95	7.37	0.72
Mg	16.29	17.70	2.33	60.30	2.44	0.33
Na	20.62	17.65	2.35	81.25	2.47	0.32
P	0.01	0.01	0.02	< 0.1	0.07	0.02
Si	11.58	12.52	1.90	159.80	32.58	0.94
Sr	0.17	0.19	0.04	0.76	0.03	0.01
Values in µg L^{-1}						
Li	<0.680	1.75	0.89	12.13	4.81	0.92
Be	0.05	0.04	0.06	1.96	0.42	<0.039
B	79.81	88.07	23.49	922.35	29.30	10.74
Ti	29.81	38.39	16.47	722.26	4314	12.85
V	2.70	4.03	1.83	61.38	27.87	1.33
Cr	1.65	2.52	0.94	41.20	20.02	0.66
Mn	8.38	5.11	85.83	72.55	33.10	4.35
Fe	779.13	1140.13	437.07	36620.00	11640.00	287.61
Co	0.89	1.12	0.62	6.02	2.61	0.08
Ni	7.06	6.26	2.32	45.65	18.72	0.85
Cu	7.66	6.64	3.18	28.16	10.47	1.37
Zn	3.54	3.43	1.49	24.86	11.01	0.88
As	0.64	0.67	0.54	2.45	1.09	0.28
Se	1.10	1.26	0.45	1.05	<0.456	<0.456
Mo	1.07	0.75	0.32	0.97	0.18	0.14
Cd	0.03	0.03	0.00	0.03	0.01	0.01
Sb	0.11	0.09	0.05	0.22	0.11	0.03
Ba	139.06	146.75	17.96	367.56	135.07	5.42
Hg	0.00	0.00	<0.004	<0.003	0.00	<0.003
Pb	0.18	0.24	0.07	6.02	1.73	0.05

Table S5. Chemical elements concentrations in leachates obtained from CFA pots growing *B. juncea*.

B. juncea						
Values in mg L^{-1}						
CFA media	**WEEK 1**	**WEEK 2**	**WEEK 5**	**WEEK 7**	**WEEK 9**	**WEEK 11**
Al	1.68	2.44	0.90	0.18	0.21	0.09
Ca	97.71	127.60	151.20	138.20	97.63	78.12
K	47.07	55.85	39.60	8.62	7.72	6.97
Mg	4.00	6.80	7.76	45.79	32.14	24.59
Na	31.67	40.40	19.22	9.22	8.10	7.20
P	< 0.005	0.01	< 0.005	0.03	0.04	0.03
Si	2.02	0.87	1.74	1.91	1.88	1.89
Sr	2.84	3.10	4.32	3.08	1.94	1.55
Values in μg L^{-1}						
Li	400.76	476.44	331.10	352.88	258.72	216.49
Be	0.00	0.01	0.00	<0.039	<0.039	<0.039
B	1365.75	1583.59	1491.62	6486.03	4901.60	4154.41
Ti	1.16	0.14	0.25	<0.070	<0.070	<0.070
V	54.04	71.46	66.39	25.92	25.28	25.03
Cr	62.75	64.82	74.56	29.15	18.61	13.04
Mn	0.92	0.44	0.89	1.07	0.75	0.48
Fe	35.56	3.12	1.56	1.13	0.93	0.62
Co	0.43	0.56	0.43	0.31	0.25	0.22
Ni	1.25	0.93	1.20	0.64	0.35	0.36
Cu	1.37	0.70	1.15	0.71	0.57	0.74
Zn	0.25	0.28	0.46	<0.181	<0.181	<0.181
As	3.42	8.56	5.42	6.06	5.86	5.17
Se	6.34	9.14	6.51	13.24	9.56	8.97
Mo	59.55	104.97	118.20	73.77	47.21	31.39
Cd	0.01	0.02	0.02	0.04	0.03	0.03
Sb	3.79	4.58	4.11	9.84	8.98	8.38
Ba	126.98	103.05	126.93	70.14	65.90	62.63
Hg	0.01	0.02	0.02	0.02	0.01	0.01
Pb	0.02	0.01	0.02	0.01	0.00	0.00

CFA: Coal-fly-ash.

Table S6. Chemical elements concentrations in leachates obtained from CFA + soil pots growing *B. juncea*.

B.juncea						
Values in mg L^{-1}						
CFA + soil media	**WEEK 1**	**WEEK 2**	**WEEK 5**	**WEEK 7**	**WEEK 9**	**WEEK 11**
Al	0.03	0.05	0.07	0.05	0.04	0.01
Ca	280.40	217.00	219.30	102.23	51.01	6.20
K	49.45	35.79	35.83	12.89	6.91	0.54
Mg	30.10	23.62	27.80	21.86	15.82	1.38
Na	49.82	29.15	19.87	15.22	6.13	0.44
P	0.03	0.06	0.04	0.04	0.04	0.04
Si	4.13	2.99	2.43	1.23	0.62	0.59
Sr	4.61	3.45	15	2.98	1.12	0.13
Values in µg L^{-1}						
Li	25.90	27.30	187.29	53.62	19.57	2.54
Be	0.01	0.00	0.01	0.04	<0.039	<0.039
B	1841.70	2140.25	2405.82	2100.15	1846.93	141.76
Ti	0.37	0.22	0.29	0.30	0.29	0.34
V	14.56	18.02	26.87	24.12	23.42	4.84
Cr	49.42	45.07	47.02	9.57	3.69	0.42
Mn	0.45	0.51	15.49	0.23	0.11	0.84
Fe	2.62	2.06	2.71	3.21	4.63	20.77
Co	1.78	1.51	2.90	1.23	0.74	0.06
Ni	2.78	1.29	2.64	2.03	0.93	0.32
Cu	4.67	1.60	4.11	3.20	2.78	0.98
Zn	1.42	0.30	0.81	0.62	<0.181	<0.181
As	11.04	10.36	7.83	8.21	7.20	1.33
Se	6.42	18	8.83	1.88	0.83	<0.456
Mo	189.41	132.89	163.92	68.25	18.74	1.07
Cd	0.03	0.02	0.03	0.02	0.01	0.01
Sb	5.24	6.15	6.89	6.32	4.46	0.32
Ba	235	180.79	208.23	126.24	71.63	10.94
Hg	0.02	0.02	0.03	0.01	0.01	0.00
Pb	0.04	0.02	0.04	0.02	0.01	0.03

CFA: Coal-fly-ash.

Table S7. Chemical elements concentrations in leachates obtained from CFA pots where no plants were grown.

No plants in the growth media						
Values in mg L^{-1}						
CFA media	**WEEK 1**	**WEEK 2**	**WEEK 5**	**WEEK 7**	**WEEK 9**	**WEEK 11**
Al	0.49	2.86	0.46	0.39	0.30	0.21
Ca	122.20	100.60	135.90	155.40	99.37	90.51
K	85.04	60.71	39.80	13.07	8.23	7.65
Mg	6.35	6.20	10.92	59.60	28.23	24.64
Na	78	49.17	21.15	11.11	6.36	5.76
P	0.01	0.01	0.00	0.03	0.01	0.03
Si	0.90	0.66	1.60	2.27	2.19	2.23
Sr	3.77	3.18	6	3.03	1.95	1.83
Values in μg L^{-1}						
Li	919.53	727.95	423.05	360.85	224.33	213.18
Be	0.00	0.00	0.00	<0.039	<0.039	<0.039
B	1544.72	1444.04	1826.02	6640.43	4556.76	4355.44
Ti	0.07	0.14	0.15	<0.070	<0.070	<0.070
V	75.56	82.59	75.19	30.13	25.87	26.84
Cr	111.31	98.10	112.31	24.13	15.19	12.91
Mn	0.96	0.67	1.24	7.32	39.83	0.17
Fe	0.59	1.15	0.73	0.92	0.55	0.52
Co	0.67	0.51	0.42	0.40	0.25	0.21
Ni	0.42	1.28	0.48	0.69	0.77	0.37
Cu	0.47	0.67	0.81	0.78	1.21	0.43
Zn	0.14	0.37	0.36	<0.181	<0.181	<0.181
As	8.47	9.39	6.42	10.79	6.63	6.05
Se	9.20	10.08	6.80	20.74	10.50	9.55
Mo	194.97	156	135.30	99.08	43.72	35.91
Cd	0.04	0.03	0.02	0.06	0.03	0.02
Sb	3.66	4.54	5.02	11.12	8.77	8.51
Ba	108.52	99.40	133.74	81.99	62.13	60.63
Hg	0.02	0.02	0.03	0.02	0.01	0.01
Pb	0.01	0.02	0.02	0.00	0.00	<0.002

CFA: Coal-fly-ash.

Table S8. BCF for chemical elements accumulating in *B. juncea* and *S. oleracea L* from 69 to 115 days for all the growth media.

B. juncea

	69 days									115 days								
	Soil			CFA			CFA + Soil			Soil			CFA			CFA + Soil		
	Leaf	Root	Stem	Leaf	Root	Stem	Leaf	Root	Stem	Leaf	Root	Stem	Leaf	Root	Stem	Leaf	Root	Stem
B	1.90	0.14	0.53	0.13	0.01	0.03	0.06	0.01	0.03	2.67	1.01	2.40	0.12	0.08	0.06	0.07	0.02	0.03
Cr	6.83	1.56	1.41	1.33	0.28	0.40	0.85	0.55	0.82	5.66	4.37	2.06	1.00	1.08	0.55	2.13	0.58	0.65
Mn	24.40	11.77	6.40	899.87	101.97	202.47	151.94	57.02	140.26	24.00	15.79	7.72	309.84	200.39	262.18	315.57	118.69	106.95
Ni	1.82	0.67	0.45	27.56	6.57	9.51	4.67	3.47	4.62	1.20	1.32	0.59	24.57	24.32	11.75	10.66	3.47	3.28
Cu	9.23	2.85	2.12	74.10	14.91	22.20	7.05	3.83	5.87	6.53	5.96	2.46	27.58	19.96	25.26	9.31	4.44	3.78
Zn	41.45	8.13	9.81	455.94	118.45	139.82	68.25	44.97	55.13	16.43	28.56	11.90	185.73	181.15	196.67	85.29	44.32	35.85
Mo	6.60	0.19	0.73	0.21	0.02	0.04	0.10	0.04	0.03	7.29	1.12	3.24	0.28	0.15	0.15	0.03	0.02	0.03
Ba	3.65	0.86	1.38	3.36	0.69	1.08	0.88	0.47	0.72	2.72	2.36	1.86	1.22	1.10	1.38	1.32	0.50	0.52
Fe	77.45	18.86	14.39	7774.27	578.01	1074.13	1873.53	684.67	2066.67	68.31	50.51	17.89	979.08	692.36	1098.15	4046.11	1128.22	1047.44

S. oleracea L

	69 days									115 days								
	Soil			CFA			CFA + Soil			Soil			CFA			CFA + Soil		
	Leaf	Root	Stem	Leaf	Root	Stem	Leaf	Root	Stem	Leaf	Root	Stem	Leaf	Root	Stem	Leaf	Root	Stem
B	0.16	0.10	0.11	0.01	0.01	0.01	0.01	0.01	0.01	0.11	0.11	0.11	0.01	0.01	0.01	0.01	0.01	0.01
Cr	1.08	1.13	1.15	0.37	0.38	0.38	1.24	1.24	1.24	1.13	1.13	1.13	0.38	0.38	0.38	1.24	1.24	1.24
Mn	9.62	6.55	6.22	105.31	95.16	96.08	8.13	7.95	8	6.92	6.89	6.90	97.36	97.28	97.32	8.01	8	8
Ni	0.52	0.53	0.50	11.29	11.29	11.18	6.11	6.10	6.09	0.51	0.51	0.51	11.24	11.23	11.23	6.10	6.10	6.10
Cu	2.33	1.99	1.77	18.47	17.55	17.37	9.45	9.33	9.34	1.94	1.93	1.93	17.62	17.61	17.61	9.36	9.36	9.36
Zn	7.66	5.33	5.21	46.04	42.01	42.53	93.17	91.38	91.86	5.67	5.65	5.66	42.96	42.93	42.95	91.92	91.91	91.92
Mo	0.30	0.22	0.24	0.01	0.01	0.01	0.01	0.01	0.01	0.24	0.24	0.24	0.01	0.01	0.01	0.01	0.01	0.01
Ba	0.45	0.32	0.31	0.51	0.47	0.48	0.36	0.35	0.35	0.34	0.34	0.34	0.48	0.48	0.48	0.35	0.35	0.35
Fe	0.23	0.25	0.19	990.45	979.55	931.66	259.83	257.75	255.96	0.22	0.22	0.22	957.95	957.33	957.31	257.23	257.19	257.20

BCF: Bioconcentration Factor; CFA: Coal-fly-ash.