

Supplementary Materials: Uptake of Potentially Toxic Elements by Four Plant Species Suitable for Phytoremediation of Turin Urban Soils

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Table S1. Summary of multiple pairwise comparisons on element concentrations in soils obtained with ANOVA and Tukey tests. B identifies soil samples whose mean concentrations in the respective elements are significantly lower than the ones obtained for soil samples identified by A; the same concept applies to C with respect to B and D with respect to C.

Soil Concentration	Group	Elements
CA, CA + FW, NOB, NOB + FW	A	Al, Ca, Ce, Cr, Fe, La, Mg, Mn, Na, Ni, Ti, V
CA, CA+FW	A	Ba, Cu, Pb, Zn
NOB, NOB+FW	B	
CA	A	
CA + FW	A B	As
NOB, NOB + FW	B	
CA	A	
NOB	A B	K
CA+FW, NOB + FW	B	
NOB	A	
NOB + FW	A B	Co
CA, CA + FW	B	
CA	A	
CA + FW	B	Cd
NOB, NOB + FW	C	
CA	A	
CA + FW	B	P
NOB	C	
NOB + FW	D	

Table S2. Element concentration (mg/kg) \pm SD in the plants' aerial parts. NOB = plants grown in Nobile soil, CA = plants grown in Campana soil, FW = addition of amendment to the soil, *p* = *Pteris vittata*, *b* = *Brassica juncea*, *h* = *Helianthus annuus*, *z* = *Zea mays*.

Ti	200	±	5	250	±	14	28	±	14	16.630	±	0.002
V	18.2	±	0.4	23.5	±	0.9	7	±	1	1.52	±	0.08
Zn	156	±	6	181	±	6	47	±	6	63	±	4

Table S4. Summary of multiple comparisons for pairs of the plants' BF with Tukey test. NOB = plants grown in Nobile soil, CA = plants grown in Campana soil, FW = addition of amendment to the soil, *p* = *Pteris vittata*, *b* = *Brassica juncea*, *h* = *Helianthus annuus*, *z* = *Zea mays*. B identifies BF values whose means are significantly lower than the ones obtained for BF values identified by A; the same concept applies to C with respect to B, D with respect to C, E with respect to D and F with respect to E.

BF	Group	Elements
CAp	A	
NOBp	B	
CApFW	C	As
NOBpFW	C D	
CAh, CAhFW, CAB, CABFW, Caz, CAzFW, NOBb, NOBbFW	D	
CAh, CAhFW, CAp, CApFW, CAB	A	
CAz, NOBpFW	B	
NOBbFW	B C	
CABFW, NOBb	B C D	Ba
NOBp	C D	
CAzFW	D	
NOBb	A	
CApFW	A B	
NOBbFW	B C	
CABFW	C D	Cd
CAh, CAhFW, CAz, CAp, NOBpFW	D E	
CAB, NOBp	E F	
CAzFW	F	
CApFW	A	
NOBp, NOBpFW	A B	
CAp	B	
CAhFW, CAz, CAB, NOBb	C	Co
CAh	C D	
CAzFW	D E	
CABFW, NOBbFW	E	
NOBpFW	A	
CApFW	A B	
NOBp	A B C	
CAp, CAB	B C D	Cr
CAz	C D E	
CAh, CAhFW, NOBb	D E	
CAzFW, CABFW, NOBbFW	E	
CAp	A	
CApFW	B	
CAh	C	
CAz	C D	
NOBpFW	D E	Cu
NOBp	E	
CAhFW	E F	
CAB, CABFW, CAzFW, NOBb, NOBbFW	F	
CApFW, NOBpFW	A	
CAp	B	
Caz	C	
CAh, CAhFW, CAB	C D	Ni
CAzFW, NOBb	C D E	
CABFW, NOBp	D E	
NOBbFW	E	
CAp	A	Pb

CApFW	B
CAhFW	C
CAh, CAz	C D
CAb	D
CAzFW, CABFW NOBb, NOBbFW, NOBp, NOBpFW	E
CAp, NOBb, NOBbFW, NOBpFW	A
CAh, CAhFW, CAz, CApFW, NOBp	A B
CAbFW	B
CAb, CAzFW	C

Table S5. Summary of multiple comparisons for pairs of the plants' TF with Tukey test. NOB = plants grown in Nobile soil, CA = plants grown in Campana soil, FW = addition of amendment to the soil, *p* = *Pteris vittata*, *b* = *Brassica juncea*, *h* = *Helianthus annuus*, *z* = *Zea mays*. B identifies BF values whose means are significantly lower than the ones obtained for BF values identified by A; the same concept applies to C with respect to B, D with respect to C, E with respect to D, F with respect to E and G with respect to F.

TF	Group	Elements
CAp	A	
NOBp	B	
NOBpFW	C	As
CApFW	C D	
CAb, CABFW, CAh, CAhFW, CAz, CAzFW NOBb, NOBbFW	D	
CAh	A	
CAb, CAhFW	B	
CAbFW	C	
CAz, NOBbFW	C D	
NOBp	C D E	Ba
CAzFW, CAp	C D E F	
NOBb	D E F	
NOBpFW	E F	
CApFW	F	
CAb, NOBbFW	A	
CAbFW, CAh NOBb	B	
CAhFW	C	Cd
CAz, CAzFW, CAp, CApFW, NOBp, NOBpFW	D	
NOBbFW	A	
CAh	B	
CAzFW	B C	
CAbFW	B C D	
CAhFW	B C D E	Co
NOBb	D E	
CAb	E F	
CAp	E F G	
CAz, NOBp	F G	
CApFW, NOBpFW	G	
CAbFW, CAzFW, NOBbFW	A	Cr
CAh, CAhFW, CAB, CAz, CAp, CApFW, NOBb, NOBp, NOBpFW	B	
NOBbFW	A	
CAhFW, NOBb	B	
CAh	C	
CAbFW	C D	
CAzFW	C D E	Cu
CAb	D E F	
NOBpFW	E F G	
CAz, NOBp	F G	

$\text{CA}_p, \text{CA}_p\text{FW}$	G	
NOB_p	A	
$\text{CA}_z\text{FW}, \text{CA}_b\text{FW}, \text{CA}_h, \text{NOB}_b\text{FW}$	B	Ni
$\text{CA}_b, \text{CA}_p, \text{CA}_p\text{FW}, \text{CA}_z, \text{CA}_h\text{FW}, \text{NOB}_b, \text{NOB}_p\text{FW}$	C	
$\text{NOB}_p, \text{NOB}_p\text{FW}$	A	
$\text{CA}_z\text{FW}, \text{CA}_b\text{FW}$	A B	
NOB_bFW	B C	
NOB_b	C D	Pb
CA_h	D E	
$\text{CA}_z, \text{CA}_h\text{FW}, \text{CA}_b, \text{CA}_p, \text{CA}_p\text{FW}$	E	
CA_h	A	
NOB_b	A B	
$\text{CA}_z\text{FW}, \text{CA}_h\text{FW}, \text{NOB}_b\text{FW}$	B C	
$\text{CA}_z, \text{CA}_b\text{FW}$	C D	Zn
CA_b	D	
$\text{CA}_p, \text{CA}_p\text{FW}, \text{NOB}_p, \text{NOB}_p\text{FW}$	E	

Table S6. Bioconcentration factors (BFs) \pm SD. Values > 1 are reported in bold.

	CA no FW							CA FW																
	<i>P. vittata</i>			<i>B. juncea</i>		<i>Z. mays</i>		<i>H. annuus</i>		<i>P. vittata</i>			<i>B. juncea</i>		<i>Z. mays</i>		<i>H. annuus</i>							
As	7	\pm	1	0.20	\pm	0.08	0.15	\pm	0.02	0.17	\pm	0.03	1.57	\pm	0.01	0.16	\pm	0.05	0.10	\pm	0.01	0.38	\pm	0.04
Ba	0.51	\pm	0.04	0.47	\pm	0.05	0.32	\pm	0.05	0.54	\pm	0.05	0.49	\pm	0.02	0.26	\pm	0.04	0.15	\pm	0.01	0.52	\pm	0.04
Cd	0.67	\pm	0.08	0.47	\pm	0.04	0.74	\pm	0.08	0.71	\pm	0.07	1.30	\pm	0.06	0.9	\pm	0.1	0.29	\pm	0.04	0.75	\pm	0.06
Co	0.27	\pm	0.03	0.16	\pm	0.05	0.19	\pm	0.03	0.15	\pm	0.03	0.37	\pm	0.01	0.06	\pm	0.01	0.08	\pm	0.01	0.19	\pm	0.02
Cr	0.3	\pm	0.1	0.3	\pm	0.1	0.18	\pm	0.06	0.15	\pm	0.04	0.38	\pm	0.01	0.03	\pm	0.01	0.06	\pm	0.01	0.15	\pm	0.03
Cu	1.5	\pm	0.2	0.32	\pm	0.07	0.83	\pm	0.09	0.9	\pm	0.1	1.21	\pm	0.02	0.28	\pm	0.06	0.27	\pm	0.03	0.43	\pm	0.02
Ni	0.33	\pm	0.01	0.16	\pm	0.05	0.18	\pm	0.03	0.17	\pm	0.03	0.49	\pm	0.01	0.05	\pm	0.01	0.07	\pm	0.01	0.17	\pm	0.03
Pb	0.51	\pm	0.04	0.12	\pm	0.02	0.14	\pm	0.02	0.15	\pm	0.02	0.383	\pm	0.001	0.02	\pm	0.01	0.06	\pm	0.01	0.164	\pm	0.003
Zn	0.87	\pm	0.09	0.38	\pm	0.06	0.75	\pm	0.09	0.77	\pm	0.08	0.70	\pm	0.05	0.6	\pm	0.1	0.37	\pm	0.02	0.73	\pm	0.05
NOB no FW							NOB FW							NOB FW										
As	3.8	\pm		0.4			0.24	\pm	0.02	0.9	\pm	0.2	0.09	\pm	0.02	0.09	\pm	0.02						
Ba	0.19	\pm		0.03			0.24	\pm	0.03	0.34	\pm	0.04	0.28	\pm	0.05									
Cd	0.56	\pm		0.14			1.5	\pm	0.3	0.76	\pm	0.08	1.2	\pm	0.1									
Co	0.30	\pm		0.02			0.17	\pm	0.02	0.33	\pm	0.04	0.032	\pm	0.004									
Cr	0.33	\pm		0.05			0.15	\pm	0.03	0.5	\pm	0.1	0.017	\pm	0.004									
Cu	0.58	\pm		0.05			0.36	\pm	0.04	0.6	\pm	0.1	0.34	\pm	0.04									
Ni	0.05	\pm		0.01			0.15	\pm	0.03	0.5	\pm	0.1	0.02	\pm	0.01									
Pb	0.043	\pm		0.001			0.04	\pm	0.01	0.045	\pm	0.004	0.049	\pm	0.005									
Zn	0.76	\pm		0.06			0.88	\pm	0.09	0.86	\pm	0.05	0.90	\pm	0.06									

