

Appendix C1. Available metals [$\mu\text{g/g}$ soil] of mobile (F1) and specifically adsorbed fraction (F2) from control soil (C) and heavy metal contaminated soils M1 and M2 measured by ESI ICP-MS resp. ESI ICP-OES, (n=3)

	M1 F1	M1 F2	C F1	C F2	M2 F1	M2 F2
Al	20.2 ± 0.2	0.9 ± 0.07	3.02 ± 0.07	31 ± 9	1.8 ± 0.07	14.2 ± 0.4
As	u.r.	u.r.	0.4 ± 0.07	0.5 ± 0.07	u.r.	u.r.
B	u.r.	u.r.	5.3 ± 0.2	2.4 ± 0.1	u.r.	u.r.
Ba	19.5 ± 0.005	1.6 ± 0.04	134.1 ± 0.02	66.8 ± 0.03	113 ± 2	71.1 ± 0.4
Ca	348 ± 5	13.9 ± 0.3	7011 ± 25	5067 ± 4	2033 ± 22	399 ± 3
	$0.04 \pm$					
Cd	0.00002	u.r.	0.02 ± 0.005	0.2 ± 0.03	0.3 ± 0.007	1.4 ± 0.007
Co	2.4 ± 0.001	0.1 ± 0.007	0.1 ± 0.005	0.3 ± 0.01	2.9 ± 0.02	3.02 ± 0.001
		$0.02 \pm$				
Cr	0.03 ± 0.005	0.0003	0.1 ± 0.01	0.3 ± 0.0001	0.02 ± 0.007	0.09 ± 0.01
Cu	0.6 ± 0.02	0.3 ± 0.04	1.1 ± 0.002	0.8 ± 0.004	8.1 ± 0.05	70.7 ± 0
Fe	30 ± 0.01	1.6 ± 0.1	4.2 ± 0.1	5.1 ± 0.2	u.r.	1.6 ± 0.002
K	64 ± 5	u.r.	154 ± 2	u.r.	56 ± 10	u.r.
Li	0.08 ± 0.01	0.1 ± 0.01	0.2 ± 0.02	0.1 ± 0.001	0.1 ± 0.01	0.2 ± 0.007
Mg	131 ± 0.7	6.8 ± 0.002	98.9 ± 0.002	490 ± 4	347 ± 2	32.1 ± 0.2
Mn	92.4 ± 0.2	4.3 ± 0.07	68.3 ± 0.2	161.3 ± 0.7	220 ± 1	99.7 ± 0.3
Na	4.9 ± 0.1	u.r.	6.8 ± 0.1	u.r.	22.9 ± 0.05	u.r.
Ni	1.8 ± 0.05	0.2 ± 0.04	0.2 ± 0.01	0.3 ± 0.04	2.6 ± 0.07	3.5 ± 0.1
P	u.r.	u.r.	16 ± 2	u.r.	u.r.	u.r.
			$0.004 \pm$			
Pb	0.1 ± 0.0005	0.2 ± 0.007	0.0002	0.9 ± 0.03	u.r.	0.5 ± 0.007

S	10 ± 5	u.r.	75 ± 5	23.5 ± 0.1	327 ± 7	151.6 ± 0.3
Si	14.7 ± 0.5	12 ± 1	57 ± 2	138 ± 11	47 ± 1	46.1 ± 0.1
		$0.09 \pm$				
Sr	1.4 ± 0.01	0.0007	47 ± 1	20.1 ± 0.2	15.2 ± 0.2	4.5 ± 0.002
Ti	u.r.	u.r.	u.r.	u.r.	u.r.	u.r.
V	u.r.	u.r.	0.2 ± 0.02	0.2 ± 0.02	u.r.	0.04 ± 0.01
Zn	0.9 ± 0.07	u.r.	u.r.	3.3 ± 0.2	10.05 ± 0.07	28.3 ± 0.3
Sc	u.r.	u.r.	u.r.	0.1 ± 0.02	u.r.	0.08 ± 0.02
				$0.09 \pm$		
Y	0.7 ± 0.02	0.3 ± 0.01	0.03 ± 0.002	0.0007	0.02 ± 0.001	0.5 ± 0
Cs	u.r.	u.r.	u.r.	u.r.	0.04 ± 0.007	u.r.
			$0.02 \pm$		$0.005 \pm$	$0.04 \pm$
La	0.3 ± 0.005	0.08 ± 0.003	0.0007	0.06 ± 0.007	0.00002	0.0007
					$0.005 \pm$	
Ce	1.5 ± 0.01	0.5 ± 0.007	0.03 ± 0.002	0.1 ± 0.01	0.001	0.09 ± 0.003
			$0.005 \pm$			
Pr	0.1 ± 0.002	0.05 ± 0.003	0.0002	0.02 ± 0.002	u.r.	0.02 ± 0.001
					$0.005 \pm$	
Nd	0.5 ± 0.01	0.2 ± 0.003	0.02 ± 0.005	0.08 ± 0.004	0.0007	0.1 ± 0.007
Sm	0.1 ± 0.002	0.09 ± 0.007	u.r.	0.02 ± 0.004	u.r.	0.05 ± 0.007
	$0.03 \pm$		$0.001 \pm$	$0.004 \pm$		
Eu	0.00007	0.02 ± 0.002	0.0005	0.002	u.r.	0.02 ± 0.003
	$0.02 \pm$	$0.01 \pm$		$0.004 \pm$		
Tb	0.0001	0.0007	u.r.	0.001	u.r.	0.01 ± 0
Gd	0.1 ± 0.005	0.1 ± 0.007	$0.005 \pm$	0.03 ± 0.004	$0.003 \pm$	0.1 ± 0.004

			0.001		0.00007	
		0.07 ±	0.006 ±		0.002 ±	
Dy	0.1 ± 0.005	0.0003	0.0005	0.02 ± 0.002	0.0002	0.06 ± 0.001
		0.01 ±	0.001 ±	0.004 ±		0.02 ±
Ho	0.02 ± 0.001	0.0007	0.0001	0.0004	u.r.	0.00003
		0.03 ±	0.004 ±			
Er	0.05 ± 0.001	0.0004	0.0007	0.01 ± 0.003	u.r.	0.04 ± 0.002
	0.006 ±	0.004 ±				0.004 ±
Tm	0.0002	0.0003	u.r.	u.r.	u.r.	0.0007
		0.02 ±	0.003 ±	0.008 ±		
Yb	0.03 ± 0.002	0.00004	0.0007	0.002	u.r.	0.02 ± 0.001
	0.005 ±	0.003 ±				0.004 ±
Lu	0.0005	0.0002	u.r.	u.r.	u.r.	0.0004
				0.009 ±		
Th	u.r.	u.r.	u.r.	0.001	u.r.	u.r.
U	0.06 ± 0.002	0.7 ± 0.007	0.02 ± 0.001	0.04 ± 0.002	0.2 ± 0.001	171 ± 0.9

*u.r.: under range