Supplementary material

Accumulation of U, Th, Pb, V, Rb and Ag in wild mushrooms *Macrolepiota procera* (Scop.) Singer from Goč, Serbia

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Figure S1. Preprocessed data for the content of elements (Pb - 1, V - 2, Rb - 3, Ag - 4, Th - 5 and U - 6, respectively) in two mushroom parts (cap – red line, stipe – green line)

Table A. Soil properties

Table B. Elements determined in standard reference material SRM 1633c (coal fly ash) and certified reference material BCR-670 (duck weed)

Table C. Correlation matrix between BCR sequential extraction phases, pseudo-total and mushroom parts for each analysed element separately

Table D. Kruskal-Wallis test applied on the results of element content in four phases of BCR extraction and each part of mushroom

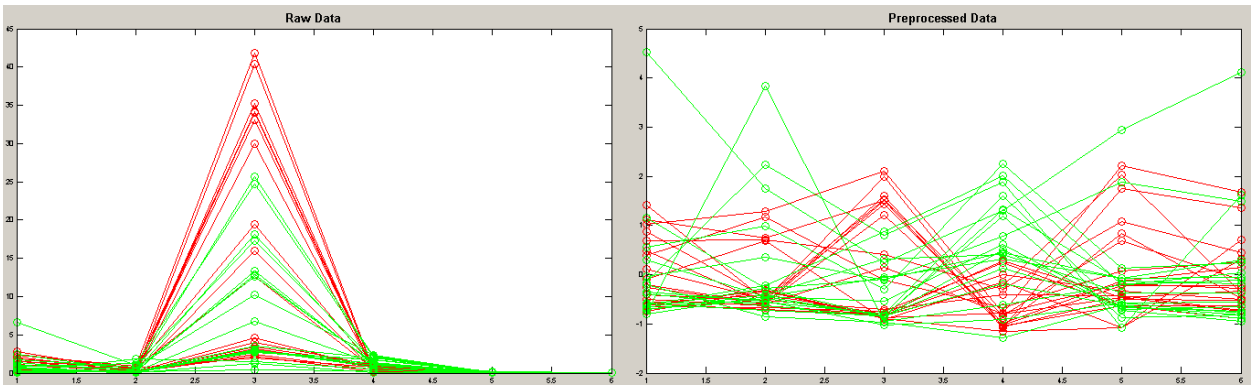

Figure S1. Preprocessed data for the content of elements (Pb - 1, V - 2, Rb - 3, Ag - 4, Th - 5 and U - 6, respectively) in two mushroom parts (cap – red line, stipe – green line)

Table A. Soil properties

Parameter	Mean value in examined soils
pH	6.0-6.2
Corg (%)	2.1-3.8
Eh (mV)	363-367
EC (mS)	200-266

Table B. Elements determined in standard reference material SRM 1633c (coal fly ash) and certified reference material BCR-670 (duck weed)

NIST SRM 1633c	Constituent	Certified value ± uncertainty* (mg/kg)	Found value ± uncertainty (mg/kg)
	U	9.25 ± 0.45	9.01 ± 0.68
	Th	23.0 ± 0.4	22.2 ± 0.9
	V	286.2 ± 7.9	288.3 ± 6.5
	Rb	117.42 ± 0.53	115.22 ± 0.44
	Pb	95.2±2.5	91.5 ± 3.8
BCR 670	Constituent	Certified value ± uncertainty* (µg/kg)	Found value ± uncertainty (µg/kg)
	U	82 ± 8	75 ± 9
	Th	159 ± 18	162 ± 6
	Pb	2060±120	2051 ± 85

* Uncertainty for 95 % confidence level (coverage factor k = 2)

Table C. Correlation matrix between BCR sequential extraction phases, pseudo-total and mushroom parts for each analyzed element separately

Pb	**F1**	**F2**	**F3**	**F4**	**PT**	**Cap**	**Stipe**
F1	1.000						
F2	**0.645**	1.000					
F3	0.263	**0.476**	1.000				
F4	0.283	**0.783**	**0.610**	1.000			
PT	**0.547**	**0.969**	**0.588**	**0.911**	1.000		
Cap	0.186	**0.662**	0.356	**0.476**	**0.625**	1.000	
Stipe	0.024	0.278	0.331	0.215	0.277	0.367	1.000

V	**F1**	**F2**	**F3**	**F4**	**PT**	**Cap**	**Stipe**
F1	1.000						
F2	0.000	1.000					
F3	-0.165	0.000	1.000				
F4	0.372	0.000	-0.140	1.000			
PT	0.368	0.000	-0.099	**0.999**	1.000		
Cap	-0.132	0.000	**0.628**	-0.049	-0.024	1.000	
Stipe	0.118	0.000	0.361	0.300	0.317	0.389	1.000

Rb	**F1**	**F2**	**F3**	**F4**	**PT**	**Cap**	**Stipe**
F1	1.000						
F2	**0.719**	1.000					
F3	0.322	0.374	1.000				
F4	**0.813**	**0.482**	0.196	1.000			
PT	**0.834**	**0.524**	0.288	**0.995**	1.000		
Cap	**0.657**	**0.731**	0.333	0.345	0.383	1.000	
Stipe	**0.664**	**0.682**	0.422	0.278	0.325	**0.828**	1.000

Ag	**F1**	**F2**	**F3**	**F4**	**PT**	**Cap**	**Stipe**
F1	1.000						
F2	0.081	1.000					
F3	-0.154	-0.232	1.000				
F4	**0.640**	0.064	0.230	1.000			
PT	**0.471**	-0.111	**0.776**	**0.727**	1.000		
Cap	**0.860**	0.061	-0.037	**0.769**	**0.542**	1.000	
Stipe	0.063	-0.105	-0.178	-0.222	-0.178	-0.015	1.000

Th	**F1**	**F2**	**F3**	**F4**	**PT**	**Cap**	**Stipe**

F1	1.000						
F2	0.305	1.000					
F3	-0.125	-0.466	1.000				
F4	0.340	0.417	0.261	1.000			
PT	0.337	0.398	0.293	**0.999**	1.000		
Cap	0.070	0.318	-0.153	0.208	0.200	1.000	
Stipe	0.157	0.368	-0.207	0.107	0.100	0.187	1.000

U	**F1**	**F2**	**F3**	**F4**	**PT**	**Cap**	**Stipe**
F1	1.000						
F2	0.233	1.000					
F3	**0.657**	**0.513**	1.000				
F4	**0.662**	0.114	**0.527**	1.000			
PT	**0.756**	0.439	**0.945**	**0.776**	1.000		
Cap	-0.144	-0.002	-0.015	-0.009	-0.019	1.000	
Stipe	0.018	0.154	0.160	0.026	0.128	**0.569**	1.000

Table D. Kruskal-Wallis test applied on the results of element content in four phases of BCR extraction and each part of mushroom

	Chi square[a]	**P**	***Z*-value**[b]
Pb	**101.61**	**<0.0001**	F1(F2,F3,F4,PT,Cap) F2(F1,F3,Cap,Stipe) F3(F1,F2,F4,PT) F4(F1,F3,PT,Cap,Stipe) PT(F1,F3,F4,Cap,Stipe) Cap(F1,F2,F4,PT) Stipe(F2,F4,PT)
V	**117.02**	**<0.0001**	F1(F3,F4,PT,Stipe) F2(F3,F4,PT,Cap,Stipe) F3(F1,F2,F4,PT,Cap,Stipe) F4(F1,F2,F3, Cap,Stipe) PT(F1,F2,F3, Cap,Stipe) Cap(F2,F3,F4,PT) Stipe(F1,F2,F3,F4,PT)
Rb	**102.25**	**<0.0001**	F1(F3,F4,PT, Cap,Stipe) F2(F4,PT, Cap,Stipe) F3(F1,F4,PT, Cap,Stipe) F4(F1,F2,F3) PT(F1,F2,F3) Cap(F1,F2,F3) Stipe(F1,F2,F3)
Ag	**67.39**	**<0.0001**	F1(F3,PT, Cap,Stipe) F2(F3,F4,PT, Cap,Stipe) F3(F1,F2,Stipe) F4(F2,Stipe) PT(F1,F2,Stipe) Cap(F1,F2,Stipe) Stipe(F1,F2,F3,F4,PT,Cap)
Th	**105.22**	**<0.0001**	F1(F3,F4,PT) F2(F3,F4,PT,Cap, Stipe) F3(F1,F2,F4,PT,Cap, Stipe) F4(F1,F2,F3, Cap, Stipe) PT(F1,F2, Cap, Stipe) Cap(F2,F3,F4,PT) Stipe(F2,F3,F4,PT)
U	**106.82**	**<0.0001**	F1(F3,F4,PT) F2(F3,F4,PT, Cap, Stipe) F3(F1,F2, Cap, Stipe) F4(F1,F2, Cap, Stipe) PT(F1,F2, Cap, Stipe) Cap(F3,F4,PT) Stipe(F3,F4,PT)

[a] $\chi^2_{cr(df(6);\alpha=0.05)} = 12.59$

[b] Regular test: Medians significantly different if z-value > 1.9600