Appendix 1

Example results of electron probe microanalyses (WDS mode) of the Podłazie plumbogummite group minerals, reported in wt.%.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
wt.%															
SO_3	0.00	0.00	0.47	0.44	1.26	0.00	3.53	1.54	3.96	0.43	0.00	0.52	0.63	2.33	2.40
P_2O_5	25.70	25.89	25.76	26.23	26.97	25.89	23.45	26.63	24.01	25.21	26.41	26.34	27.89	28.53	27.24
SiO_2	1.55	2.27	1.44	2.97	1.01	0.77	0.38	0.58	0.20	0.91	1.68	0.88	0.93	0.00	0.00
Al_2O_3	29.01	28.78	29.32	29.19	28.77	28.17	28.74	29.57	29.36	29.10	28.91	29.08	29.14	31.00	31.37
La_2O_3	0.00	0.00	0.00	0.41	0.54	0.00	5.80	1.21	5.25	0.39	0.00	0.00	0.00	1.23	1.72
Ce_2O_3	7.42	7.08	6.94	6.91	5.55	7.11	9.05	7.11	8.45	6.83	6.39	6.84	7.10	2.28	3.74
PbO	0.00	0.00	1.47	1.30	2.55	0.00	0.00	3.15	0.00	1.56	1.55	2.56	2.00	0.00	0.00
BaO	20.08	19.86	20.47	18.56	16.84	20.90	0.00	13.39	0.00	18.11	17.79	17.85	19.28	0.00	2.30
SrO	0.67	0.53	0.50	0.82	2.08	0.61	7.16	2.04	6.55	0.77	0.67	0.65	0.52	13.78	8.54
CaO	2.22	2.01	2.40	2.27	2.64	1.88	1.00	2.46	0.99	2.41	2.67	2.52	2.42	3.51	5.12
F	1.33	1.39	1.15	1.59	0.00	1.08	0.00	0.00	0.00	1.12	1.17	1.19	0.80	0.85	0.00
Σ	87.97	87.82	89.93	90.68	88.21	86.95	79.10	87.86	78.77	86.83	87.23	88.45	90.71	83.51	83.42
H_2O[1)]	12.03	12.18	10.07	9.32	11.80	13.05	20.90	12.32	21.23	13.17	12.78	11.55	9.29	16.49	16.58
apfu (basis: S+P+Si+Al+La+Ce+Pb+Ba+Sr+Ca = 6)															
S			0.03	0.03	0.08		0.24	0.10	0.26	0.03		0.03	0.04	0.14	0.20
P	1.84	1.85	1.82	1.82	1.90	1.89	1.77	1.88	1.79	1.83	1.89	1.88	1.94	1.92	1.82
Si	0.13	0.19	0.12	0.24	0.08	0.07	0.03	0.05	0.02	0.08	0.14	0.07	0.08		
Al	2.90	2.87	2.88	2.82	2.82	2.91	3.01	2.90	3.05	2.94	2.88	2.89	2.82	2.90	2.92
La				0.01	0.02		0.19	0.04	0.17	0.01				0.04	0.05
Ce	0.23	0.22	0.21	0.21	0.17	0.22	0.30	0.22	0.27	0.21	0.20	0.21	0.21	0.07	0.11
Pb			0.03	0.03	0.06			0.07		0.04	0.04	0.06	0.04		
Ba	0.67	0.66	0.67	0.60	0.55	0.71		0.44		0.61	0.59	0.59	0.62		0.07
Sr	0.03	0.03	0.02	0.04	0.10	0.03	0.37	0.10	0.33	0.04	0.03	0.03	0.02	0.64	0.39
Ca	0.20	0.18	0.21	0.20	0.24	0.17	0.09	0.22	0.09	0.22	0.24	0.23	0.21	0.30	0.43
F	0.35	0.37	0.30	0.41	0.00	0.29				0.30	0.31	0.32	0.21	0.21	
OH	5.93	5.61	5.60	5.10	5.77	6.06	6.28	6.05	6.11	6.15	5.70	5.85	5.10	5.50	5.90
H_2O	0.44	0.63			0.38	0.72	3.07	0.49	3.20	0.69	0.75	0.33		1.62	1.42
sys.[2)]	Gcx	Gcx	Gcx	Gcx	Gcx	Gcx	Flr	Gcx	Flr	Gcx	Gcx	Gcx	Gcx	Goy	Cnd

Appendix 1 – continuation

	16	17	18	19	20	21	22	23	24	25	26	27			
wt.%															
SO_3	2.14	2.11	3.06	2.12	4.44	3.87	0.00	0.00	0.00	0.00	0.00	0.00			
P_2O_5	26.06	26.62	28.56	28.19	27.04	26.41	27.18	27.22	26.63	25.86	26.14	25.40			
SiO_2	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Al_2O_3	29.88	30.10	31.67	30.20	29.96	30.86	28.80	29.58	29.30	28.71	28.92	29.21			
La_2O_3	0.48	0.59	1.81	0.54	1.23	0.92	0.00	0.00	0.00	0.00	0.00	0.37			
Ce_2O_3	6.57	6.62	4.42	1.32	2.26	1.99	8.10	7.63	7.57	8.10	8.36	7.94			
PbO	2.11	2.11	0.00	0.00	1.14	0.00	0.00	1.32	0.00	0.00	0.00	0.00			
BaO	17.37	17.16	0.00	0.00	1.95	0.00	22.88	23.59	22.93	20.71	21.90	21.57			
SrO	3.47	3.22	8.96	17.94	13.31	15.43	0.59	0.57	0.66	0.52	0.64	0.71			
CaO	1.79	2.02	4.91	1.69	3.36	3.04	1.75	1.80	1.81	1.66	1.89	1.81			
F	0.81	0.00	0.00	0.83	0.00	0.00	1.23	1.03	0.96	1.15	0.88	1.13			
Σ	90.68	90.54	83.47	82.82	84.69	82.52	90.53	92.75	89.85	86.71	88.73	88.13			
H_2O[1)]	9.32	9.46	16.53	17.18	15.31	17.48	9.47	7.25	10.15	13.29	11.27	11.87			
S	0.13	0.13	0.18	0.13	0.27	0.23									
P	1.82	1.84	1.89	1.94	1.83	1.79	1.94	1.91	1.90	1.91	1.89	1.85			
Si			0.01												
Al	2.90	2.89	2.92	2.89	2.82	2.91	2.86	2.88	2.91	2.95	2.91	2.96			
La	0.01	0.02	0.05	0.02	0.04	0.03						0.01			
Ce	0.20	0.20	0.13	0.04	0.07	0.06	0.25	0.23	0.23	0.26	0.26	0.25			
Pb	0.05	0.05			0.02			0.03							
Ba	0.56	0.55			0.06		0.76	0.76	0.76	0.71	0.73	0.73			
Sr	0.17	0.15	0.41	0.84	0.62	0.72	0.03	0.03	0.03	0.03	0.03	0.04			
Ca	0.16	0.18	0.41	0.15	0.29	0.26	0.16	0.16	0.16	0.15	0.17	0.17			
F	0.21			0.21			0.33	0.27	0.26	0.32	0.24	0.31			
OH	5.13	5.15	5.72	5.42	5.45	5.81	5.33	4.00	5.71	6.26	6.37	6.52			
H_2O			1.46	1.94	1.35	1.76				0.73	0.02	0.14			
sys.[2)]	Gcx	Gcx	Goy/Cnd	Goy	Goy	Goy	Gcx	Gcx	Gcx	Gcx	Gcx	Gcx			

Analyses 1–6: type I (sandstone-embedded fine aggregates); 7–12 – type II (sandstone-embedded, coarse, zoned crystals); 13–18: type III (bone-disseminated, coarse, zoned crystals); 19–21: type IIIa (Sr-rich crystals within more compact bone); 22–27: type IV (bone replacement matter)

[1)] by difference; [2)] systematics