

Table 2. Analytical data for corundum "cumulates"

	1210B-4								1210B-5				1125-2D				
	corundum			β-alumina	Cr-alloys				β-alumina	corundum		Cr-alloy	β-alumina	corundum			Cr alloy
wt %	cores	rims	outer	Na-Cr	wt%	SEM				cores	rims			cores	rims	outer	
	n=3	n=3	n=3	n=3		n=2	n=1	n=1	n=3	n=6	n=4	n=3	n=5	n=4	n=3	n=2	n=2
SiO ₂	0.02	0.01	0.02	0.07	Si	0.10	0.06	0.05	0.00	0.02	0.01	0.04 (Si)	0.01	0.02	0.02	0.00	0.11
ZrO ₂	0.01	0.00	0.00	0.02	Cr	51.68	49.69	78.89	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.02	
TiO ₂	0.01	0.01	0.01	0.01	Fe	44.78	46.12	16.68	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.13	
Al ₂ O ₃	97.63	98.39	94.29	88.06	Ga	2.76	n/a	n/a	87.25	99.65	94.02	0.15 (Al)	85.96	96.27	72.38	64.62	0.07
Cr ₂ O ₃	2.17	1.26	5.33	4.40	total	99.31	95.87	95.62	1.96	0.40	6.07	99.47(Cr)	2.97	3.78	27.05	34.19	99.5
V ₂ O ₃	0.00	0.01	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.04	
FeO	0.02	0.01	0.00	0.02	at.%				0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	
MnO	0.00	0.01	0.03	0.01	Si	0.20	0.12	0.1	0.00	0.02	0.01	0.27(Mn)	0.02	0.02	0.07	0.06	0.23
MgO	0.00	0.01	0.00	0.34	Cr	53.89	53.58	83.47	1.39	0.03	0.01	0.00	0.06	0.00	0.00	0.02	
CaO	0.00	0.00	0.01	0.14	Fe	43.47	46.30	16.43	0.08	0.00	0.00	0.00	0.02	0.01	0.01	0.01	
Na ₂ O	0.00	0.00	0.00	5.01	Ga	2.14			0.06	0.00	0.01	0.02	0.07	0.01	0.01	0.02	
K ₂ O	0.00	0.00	0.01	0.21					7.17	0.00	0.01	0.00	11.50	0.00	0.01	0.02	
total	99.81	99.69	99.68	93.30					97.88	100.13	100.10	99.99	100.6	100.1	99.6	99.11	100.00
at %																	
Si	0.01		0.01	0.02								0.09		0.01	0.01		0.20
Zr																	
Ti																0.04	
Al	39.4	39.65	38.53	36.51					35.31	39.88	38.33	0.29	34.17	38.94	31.92	29.46	0.13
Cr	0.59	0.34	1.46	1.22					0.54	0.11	1.66	99.38	0.79	1.03	8.00	10.46	99.47
V															0.01	0.01	
Fe																	
Ni																	
Mn												0.26			0.02	0.02	0.19
Mg				0.18					0.72				0.03		0.03	0.01	
Ca				0.04					0.03				0.01				
Na				3.42									0.05				
K				0.09					3.16				4.95				
O	60.0	60.0	60.0	58.6					63.4	60.0	60.0		65.0	60.0	60.0	60.0	
Cr#	0.01	0.01	0.04	0.03					0.02	0.003	0.042		0.02	0.026	0.200	0.262	