

ICP-MS & XRF

2021 Prices: Excluding 15% VAT for SA Clients

Process	Description	Unit Cost								
		User Analyst		CAF staff Analyst						
		SU Academics	Other SA Academics	SU Academics	Other SA Academics	Non SA Academics	SA Industry	Non SA Industry	Africa Academics	Africa Non-Academic
Sample Preparation										
Microwave Digestion										
Ball Milling				R 40	R 50	€3,33	R 80	€5,33	\$3,6	\$5,7
Microwave digestion				R 98	R 120	€7,00	R 231	€15,40	\$8,6	\$16,5
Rock & Mineral Sample Preparation										
Rock crushing (< 2kg) + Riffle Splitter		R 25	R 33							
Milling (disk mill)		R 25	R 33							
Milling (Swing mill)		R 28	R 36							
Sieve to - 350µm	Nylon mesh cuts supplied per sample	R 35	R 42							
Panning		R 25	R 33							
Magnetic separation		R 25	R 33							
Heavy liquid		R 215	R 273							
Grain Picking		R 0	R 0	R 361	R 460	€30,67	R 700	€46,67	\$32,9	\$50,0
Mounting & Polishing	Per mount, up to 6 samples per mount	R 98	R 125	R 618	R 789	€52,58	R 2 000	€133,35	\$56,3	\$142,9
Precise rock cutting		R 46	R 57	R 77	R 96	€6,42	R 189	€12,60	\$6,9	\$13,5
Polishing - no mounting		R 65	R 80	R 144	R 170	€11,32	R 400	€26,67	\$12,1	\$28,6
Grinding		R 46	R 57	R 88	R 109	€7,25	R 231	€15,40	\$7,8	\$16,5
Complete Minsep to produce heavy minerals fraction (excl mount)		R 353	R 451							
Geochemical Analysis										
Whole Rock Chemistry										
XRF: Majors on fusion, incl fusion disk & LOI	SiO ₂ , TiO ₂ , Al ₂ O ₃ , Total Fe ₂ O ₃ , MnO, MgO, K ₂ O, CaO, Na ₂ O, P ₂ O ₅ , Cr ₂ O ₃			R 192	R 242	€20,0	R 583	€36,7	\$17,3	\$41,6
LA ICP-MS Traces on fusions	Sc, V, Cr, Co, Ni, Cu, Zn, Rb, Sr, Y, Zr, Nb, Mo, Cs, Ba, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Hf, Ta, Pb, Th, U			R 160	R 184	€16,7	R 504	€33,3	\$13,2	\$36,0
Fusion for Traces only				R 65	R 83	€5,5	R 124	€8,3	\$5,9	\$8,8
Fusion mount for Traces				R 38	R 48	€2,8	R 72	€5,3	\$3,4	\$5,2

Complete XRF Majors + LA ICP-MS Traces				R 390	R 474	€39,5	R 1 159	€75,3	\$33,9	\$82,8
XRF: Traces on pellets	<i>Ni, Cu, Zn, Ga, Rb, Sr, Y, Zr, Nb, Pb, Th, U, Ti, V, Cr, Co, Ba, La, Ce, Nd</i>			R 173	R 212	€14,1	R 404	€27,0	\$15,2	\$28,9
XRF: Base Metals on pellets	<i>Cu, Co, Ni, Pb, Fe</i>			R 136	R 169	€11,2	R 310	€20,7	\$12,1	\$22,1
XRF: P & S on pellets	<i>P, S</i>			R 115	R 146	€9,7	R 278	€18,6	\$10,4	\$19,9
XRF Traces method development (p/h)				R 454	R 571	€38,1	R 945	€63,0	\$40,8	\$67,5
XRF qualitative scan				R 281	R 354	€23,6	R 620	€41,3	\$25,3	\$44,3
LA ICP-MS Mineral traces & Isotope Analysis										
In-situ mineral traces LA Q-ICP-MS (p/h)	<i>User setting spots for analysis</i>	R 420	R 533							
	<i>Instrument set-up & analysis</i>			R 583	R 740	€49,4	R 1 470	€98,0	\$52,9	\$105,0
E2 LA ICP-MS isotopes (p/h)	<i>User setting spots for analysis</i>	R 433	R 578							
	<i>Instrument set-up & analysis</i>			R 504	R 640	€42,7			\$45,7	
	<i>Super-user instrument tune & analysis</i>	R 433	R 578							
In-situ mineral traces data processing (p/h)				R 330	R 419	€27,9	R 735	€49,0	\$29,9	\$52,5
CHNS Analysis										
CHNS Analysis - Rush Fee	1-2 samples rush fee			R 700	R 845	€56,30	R 1 014	€67,6	\$60,3	\$72,5
CHNS Analysis per sample	1 - 20 samples	R 117	R 131	R 150	R 180	€11,98	R 444	€29,6	\$12,8	\$31,7
CHNS Analysis per sample	21 - 40 samples	R 106	R 118	R 139	R 167	€11,13	R 407	€27,1	\$11,9	\$29,0
CHNS Analysis per sample	> 40 samples	R 101	R 111	R 130	R 156	€10,40	R 396	€26,4	\$11,1	\$28,3
CN Analysis per sample	1 - 20 samples	R 113	R 128	R 140	R168	€11,20	R 430	€28,6	\$12,0	\$30,7
CN Analysis per sample	21 - 40 samples	R 103	R 115	R 130	R155	€10,33	R 393	€26,2	\$11,1	\$28,1
CN Analysis per sample	> 40 samples	R 98	R 109	R 125	R145	€9,67	R 383	€25,5	\$10,4	\$27,4
Major & Trace Cation Analysis										
ICP-AES & ICP-MS Complete										
Major, minor & trace elements combined	<i>Na, K, Ca, Mg, B, Ba, Sr, P, Si, Al, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Sn, Sb, Mo, Cd, Pb, Hg</i>			R 294	R 371	€24,7	R 1 523	€101,50	\$26,5	\$108,8
ICP - AES Major elements										
ICP-AES: majors & traces package	<i>Na, K, Ca, Mg, Al, Cr, Co, Cu, Ni, Fe, Mn, Pb, Zn, P, Si, B, Ba, Sr</i>			R 170	R 207	€13,80	R 756	€50,40	\$14,8	\$54,0
ICP-AES: Basic chemistry	<i>Na, K, Ca, Mg, Al, Cu, Ni, Fe, Mn, Zn, B</i>			R 149	R 186	€12,42	R 620	€41,30	\$13,3	\$44,3
ICP-AES: single majors element				R 67	R 88	€5,87	R 194	€12,95	\$6,3	\$13,9
ICP-AES: up to 6 major elements				R 108	R 140	€9,32	R 425	€28,35	\$10,0	\$30,4
ICP-AES REE's single element				R 70	R 91	€6,07	R 208	€13,86	\$6,5	\$14,9
ICP-AES REE's up to 6 elements				R 131	R 165	€10,97	R 425	€28,35	\$11,8	\$30,4
ICP-AES REE's complete				R 202	R 233	€15,53	R 809	€53,90	\$16,6	\$57,8
ICP-AES PGM's single element				R 70	R 91	€6,07	R 208	€13,86	\$6,5	\$14,9
ICP-AES complete PGM's				R 135	R 165	€10,97	R 457	€30,45	\$11,8	\$32,6

ICP - MS Trace elements										
ICP-MS: metals & toxic elements	<i>Al, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Sn, Sb, Mo, Cd, Pb, Hg</i>			R 185	R 228	€14,23	R 1 045	€69,65	\$16,3	\$74,6
ICP-MS: single trace element				R 118	R 153	€10,21	R 221	€14,70	\$10,9	\$15,8
ICP-MS: up to 6 trace elements				R 152	R 197	€13,11	R 761	€50,75	\$14,0	\$54,4
ICP-MS Drinking water	<i>Na, K, Ca, Mg, Al, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Sn, Sb, Mo, Cd, Pb, Hg</i>			R 240	R 305	€20,32	R 1 200	€80,00	\$21,8	\$85,7
ICP-MS REE's single element				R 131	R 165	€10,97	R 254	€16,94	\$11,8	\$18,2
ICP-MS REE's Complete				R 191	R 244	€16,28	R 1 097	€73,15	\$17,4	\$78,4
ICP-MS PGM's single element				R 131	R 165	€10,97	R 254	€16,94	\$11,8	\$18,2
ICP-MS PGM's complete				R 164	R 210	€14,01	R 809	€53,90	\$15,0	\$57,8
ICP-MS non std single element				R 144	R 166	€11,04	R 263	€17,50	\$11,8	\$18,8
ICP-MS non std up to 6 elements: Group 1	<i>Li, Be, Ag, Si, P, S</i>			R 196	R 259	€17,25	R 809	€53,90	\$18,5	\$57,8
ICP-MS non std up to 6 elements: Group 2	<i>Ti, Zr, Nb, Hf, Ta, W</i>			R 196	R 259	€17,25	R 809	€53,90	\$18,5	\$57,8
ICP-MS non std up to 6 elements: Group 3	<i>Ga, Rb, Bi, Tl, U</i>			R 196	R 259	€17,25	R 809	€53,90	\$18,5	\$57,8
ICP-MS non std up to 6 elements: Group 4	<i>Ge, Te, In</i>			R 185	R 233	€15,53	R 735	€49,00	\$16,6	\$52,5
ICP-MS non-std single element added to other trace element sequence	<i>Li, Be, Ti, Ag</i>			R 66	R 85	€5,66	R 116	€7,70	\$6,1	\$8,3