

**2023 Prices**
**Excl 15% VAT for SA Clients**

Process	Description	Unit Cost						
		User Analyst		CAF staff				
		SU Academics	Other SA Academics	SU Academics	Other SA Academics	SA Industry	Non-SA Academics	Non-SA Industry
<b>Sample Preparation</b>								
<b>Microwave Digestion</b>								
Ball Milling				R 69	R 85	R 88	\$6,1	\$6,3
Hotplate digestion				R 45	R 50	R 70		
Microwave digestion				R 98	R 124	R 238	\$8,8	\$17,0
<b>Rock &amp; Mineral Sample Preparation</b>								
Rock crushing (< 2kg) + Riffle Splitter		R 30	R 36		R 150	R 250	\$10,7	\$17,9
Milling (disk mill)		R 30	R 36		R 150	R 250	\$10,7	\$17,9
Milling (Swing mill)		R 30	R 36		R 150	R 250	\$10,7	\$17,9
Sieve to - 350µm	Nylon mesh cuts supplied per sample	R 40	R 48		R 150	R 250	\$10,7	\$17,9
Panning		R 30	R 36		R 150	R 250	\$10,7	\$17,9
Magnetic separation		R 30	R 36		R 150	R 250	\$10,7	\$17,9
Heavy liquid		R 250	R 300		R 600	R 1 200	\$42,9	\$85,7
Grain Picking		R 0	R 0	R 390	R 507	R 860	\$36,2	\$61,4
Mounting & Polishing	Per mount, up to 6 samples per mount	R 115	R 138	R 681	R 886	R 1 600	\$63,3	\$114,3
Precise rock cutting		R 55	R 66	R 84	R 106	R 200	\$7,6	\$14,3
Polishing - no mounting		R 75	R 90	R 156	R 187	R 420	\$13,4	\$30,0
Grinding		R 55	R 66	R 95	R 120	R 245	\$8,6	\$17,5
CL Imaging (per hour)					R 1 110	R 1 450	\$79,3	\$103,6
<b>Complete Minsep to produce heavy minerals fraction (excl mount)</b>		<b>R 410</b>	<b>R 492</b>		<b>R 1 350</b>	<b>R 2 450</b>	<b>\$96,4</b>	<b>\$175,0</b>
<b>Geochemical Analysis</b>								
<b>Whole Rock Chemistry</b>								
XRF: Majors on fusion, incl fusion disk & LOI	SiO <sub>2</sub> , TiO <sub>2</sub> , Al <sub>2</sub> O <sub>3</sub> , Total Fe <sub>2</sub> O <sub>3</sub> , MnO, MgO, K <sub>2</sub> O, CaO, Na <sub>2</sub> O, P <sub>2</sub> O <sub>5</sub> , Cr <sub>2</sub> O <sub>3</sub>			R 214	R 279	R 583	\$18,6	\$38,8
XRF majors on soil, incl pellet checks				R 239	R 309	R 613	\$20,6	\$40,8
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,			R 164	R 197	R 529	\$13,2	\$35,2
Fusion for Traces only				R 85	R 102	R 122	\$6,8	\$8,2
Fusion mount for Traces				R 40	R 48	R 70	\$3,2	\$4,7
<b>Complete XRF Majors + LA ICP-MS Traces</b>				<b>R 418</b>	<b>R 524</b>	<b>R 1 181</b>	<b>\$35,0</b>	<b>\$78,8</b>

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 187	R 229	R 446	\$16,4	\$29,7
XRF: Base Metals on pellets	<i>Cu, Co, Ni, Pb, Fe</i>			R 147	R 182	R 341	\$13,0	\$22,8
XRF: P & S on pellets	<i>P, S</i>			R 124	R 158	R 307	\$11,3	\$20,5
XRF Traces method development (p/h)				R 491	R 618	R 1 042	\$44,1	\$69,5
XRF qualitative scan				R 304	R 383	R 683	\$27,3	\$45,5
<b>LA ICP-MS Mineral traces &amp; Isotope Analysis</b>								
In-situ mineral traces LA Q-ICP-MS (p/h)	<i>User setting spots for analysis</i>	R 480	R 570					
	<i>Instrument set-up &amp; analysis</i>			R 660	R 800	R 1 200	\$57,1	\$85,7
E2 LA ICP-MS isotopes (p/h)	<i>User setting spots for analysis</i>	R 500	R 660					
	<i>Instrument set-up &amp; analysis</i>			R 660	R 800	R 2 000	\$57,1	\$142,9
	<i>Super-user instrument tune &amp; analysis</i>	R 500	R 660					
Data processing (p/h)				R 450	R 540	R 810	\$38,6	\$57,9
<b>CHNS Analysis</b>								
C H N S Analysis - Rush Fee	1-2 samples rush fee			R 735	R 883	R 1 065	\$63,0	\$76,1
C H N S Analysis per sample	1 - 20 samples			R 157	R 189	R 466	\$13,5	\$33,3
C H N S Analysis per sample	21 - 40 samples	R 126	R 151	R 146	R 175	R 427	\$12,5	\$30,5
C H N S Analysis per sample	> 40 samples	R 121	R 145	R 137	R 164	R 416	\$11,7	\$29,7
C N Analysis per sample	1 - 20 samples			R 147	R 176	R 451	\$12,6	\$32,2
C N Analysis per sample	21 - 40 samples	R 121	R 145	R 137	R 164	R 413	\$11,7	\$29,5
C N Analysis per sample	> 40 samples	R 116	R 139	R 131	R 158	R 402	\$11,3	\$28,7
<b>CHNS - Soil samples</b>								
C H N S Analysis - Rush Fee	1-2 samples rush fee			R 756	R 907	R 1 065	\$64,8	\$76,1
C H N S Analysis per sample	1 - 20 samples			R 177	R 213	R 499	\$15,2	\$35,6
C H N S Analysis per sample	21 - 40 samples	R 142	R 170	R 166	R 199	R 457	\$14,2	\$32,6
C H N S Analysis per sample	> 40 samples	R 137	R 164	R 156	R 188	R 445	\$13,4	\$31,8
C N Analysis per sample	1 - 20 samples			R 167	R 200	R 483	\$14,3	\$34,5
C N Analysis per sample	21 - 40 samples	R 137	R 164	R 156	R 188	R 442	\$13,4	\$31,6
C N Analysis per sample	> 40 samples	R 131	R 158	R 151	R 181	R 430	\$13,0	\$30,7
<b>TOC- All samples</b>								
TOC Analysis per sample	21 - 40 samples	R 166	R 199	R 207	R 248	R 502	\$17,7	\$35,8
TOC Analysis per sample	> 40 samples	R 161	R 193	R 202	R 241	R 490	\$17,2	\$35,0
<b>Major &amp; Trace Cation Analysis</b>								
<b>ICP-AES &amp; ICP-MS Complete</b>								

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 317	R 401	R 1 568	\$26,7	\$112,0
<b>ICP - AES Major elements</b>								
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 184	R 224	R 756	\$16,0	\$54,0
ICP-AES: Basic chemistry	<i>Na, K, Ca, Mg, Al, Cu, Ni, Fe, Mn, Zn, B</i>			R 162	R 201	R 620	\$14,4	\$44,3
ICP-AES: single majors element				R 72	R 95	R 194	\$6,8	\$13,9
ICP-AES: up to 6 major elements				R 117	R 151	R 425	\$10,8	\$30,4
ICP-AES REE's single element				R 76	R 99	R 208	\$7,0	\$14,9
ICP-AES REE's up to 6 elements				R 141	R 178	R 425	\$12,7	\$30,4
ICP-AES REE's complete				R 218	R 252	R 750	\$18,0	\$53,6
ICP-AES PGM's single element				R 76	R 99	R 208	\$7,0	\$14,9
ICP-AES complete PGM's				R 146	R 178	R 457	\$12,7	\$32,6
<b>ICP - MS Trace elements</b>								
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 201	R 246	R 1 076	\$17,6	\$76,9
ICP-MS: single trace element				R 128	R 166	R 238	\$11,8	\$17,0
ICP-MS: up to 6 trace elements				R 165	R 213	R 784	\$15,2	\$56,0
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 260	R 330	R 1 236	\$23,5	\$88,3
ICP-MS REE's single element				R 135	R 170	R 262	\$12,1	\$18,7
ICP-MS REE's Complete				R 206	R 264	R 1 076	\$18,9	\$76,9
ICP-MS PGM's single element				R 135	R 170	R 262	\$12,1	\$18,7
ICP-MS PGM's complete				R 177	R 227	R 833	\$16,2	\$59,5
ICP-MS non std single element				R 149	R 171	R 270	\$12,2	\$19,3
ICP-MS non std up to 6 elements: Group 1	<i>Li, Be, Ag, Si, P, S</i>			R 202	R 267	R 833	\$19,0	\$59,5
ICP-MS non std up to 6 elements: Group 2	<i>Ti, Zr, Nb, Hf, Ta, W</i>			R 202	R 267	R 833	\$19,0	\$59,5
ICP-MS non std up to 6 elements: Group 3	<i>Ga, Rb, Bi, Tl, U</i>			R 202	R 267	R 833	\$19,0	\$59,5
ICP-MS non std up to 6 elements: Group 4	<i>Ge, Te, In</i>			R 191	R 240	R 757	\$17,1	\$54,1
ICP-MS non-std single element added to other trace element sequence	<i>Li, Be, Ti, Ag</i>			R 66	R 75	R 95	\$6,1	\$8,3