

HAIR ELEMENTS



PATIENT: No 23
SEX: Male
AGE: 39
Location: Cape Town, South Africa

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	2.0	< 7.0		
Antimony	0.040	< 0.066		
Arsenic	0.087	< 0.080		
Beryllium	< 0.01	< 0.020		
Bismuth	0.002	< 0.060		
Cadmium	0.012	< 0.15		
Lead	0.20	< 2.0		
Mercury	3.6	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.001	< 0.060		
Nickel	0.05	< 0.40		
Silver	0.03	< 0.12		
Tin	0.08	< 0.30		
Titanium	0.33	< 1.0		
Total Toxic Representation				

ESSENTIAL AND OTHER ELEMENTS							
ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE				
			2.5 th	16 th	50 th	84 th	97.5 th
Calcium	236	200- 750					
Magnesium	35	25- 75					
Sodium	65	12- 90					
Potassium	30	9- 40					
Copper	8.3	10- 28					
Zinc	180	130- 200					
Manganese	0.06	0.15- 0.65					
Chromium	0.60	0.20- 0.40					
Vanadium	0.075	0.018- 0.065					
Molybdenum	0.022	0.025- 0.064					
Boron	1.3	0.40- 3.0					
Iodine	0.65	0.25- 1.3					
Lithium	0.005	0.007- 0.023					
Phosphorus	190	160- 250					
Selenium	0.91	0.95- 1.7					
Strontium	0.19	0.30- 3.5					
Sulfur	43700	44500- 52000					
Barium	0.08	0.16- 1.6					
Cobalt	0.003	0.013- 0.035					
Iron	9.5	5.4- 13					
Germanium	0.029	0.045- 0.065					
Rubidium	0.029	0.011- 0.12					
Zirconium	0.057	0.020- 0.44					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 10/9/2006	Sample Size: 0.201 g			Ca/Mg	6.74	4- 30
Date Received: 10/18/2006	Sample Type: Head			Ca/P	1.24	0.8- 8
Date Completed: 10/20/2006	Hair Color: Brown			Na/K	2.17	0.5- 10
	Treatment:			Zn/Cu	21.7	4- 20
Methodology: ICP-MS	Shampoo:			Zn/Cd	> 999	> 800

V06.99