

HAIR ELEMENTS



PATIENT: No 3
SEX: Male
AGE: 51
Location: Cape Town, South Africa

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	8.4	< 7.0		
Antimony	0.058	< 0.066		
Arsenic	0.045	< 0.080		
Beryllium	< 0.01	< 0.020		
Bismuth	0.012	< 0.060		
Cadmium	0.014	< 0.15		
Lead	0.52	< 2.0		
Mercury	3.3	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.006	< 0.060		
Nickel	0.11	< 0.40		
Silver	0.04	< 0.12		
Tin	0.06	< 0.30		
Titanium	0.24	< 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	187	200- 750					
Magnesium	21	25- 75					
Sodium	65	12- 90					
Potassium	74	9- 40					
Copper	8.6	10- 28					
Zinc	160	130- 200					
Manganese	0.07	0.15- 0.65					
Chromium	0.47	0.20- 0.40					
Vanadium	0.022	0.018- 0.065					
Molybdenum	0.019	0.025- 0.064					
Boron	0.94	0.40- 3.0					
Iodine	2.1	0.25- 1.3					
Lithium	0.004	0.007- 0.023					
Phosphorus	158	160- 250					
Selenium	0.96	0.95- 1.7					
Strontium	0.23	0.30- 3.5					
Sulfur	48400	44500- 52000					
Barium	0.12	0.16- 1.6					
Cobalt	0.005	0.013- 0.035					
Iron	5.9	5.4- 13					
Germanium	0.034	0.045- 0.065					
Rubidium	0.067	0.011- 0.12					
Zirconium	1.6	0.020- 0.44					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 7/23/2006	Sample Size: 0.203 g			Ca/Mg	8.9	4- 30
Date Received: 8/31/2006	Sample Type: Head			Ca/P	1.18	0.8- 8
Date Completed: 9/5/2006	Hair Color: Gray			Na/K	0.878	0.5- 10
	Treatment:			Zn/Cu	18.6	4- 20
Methodology: ICP-MS	Shampoo: Clairol			Zn/Cd	> 999	> 800