

HAIR ELEMENTS



PATIENT: N0 21
SEX: Male
AGE: 54
Location: Cape Town, South Africa

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	5.4	< 7.0		
Antimony	0.014	< 0.066		
Arsenic	0.029	< 0.080		
Beryllium	< 0.01	< 0.020		
Bismuth	< 0.002	< 0.060		
Cadmium	0.030	< 0.15		
Lead	0.01	< 2.0		
Mercury	0.93	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	< 0.001	< 0.060		
Nickel	0.04	< 0.40		
Silver	0.01	< 0.12		
Tin	0.60	< 0.30		
Titanium	0.18	< 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	693	200- 750					
Magnesium	23	25- 75					
Sodium	11	12- 90					
Potassium	5	9- 40					
Copper	9.0	10- 28					
Zinc	150	130- 200					
Manganese	0.04	0.15- 0.65					
Chromium	0.46	0.20- 0.40					
Vanadium	0.036	0.018- 0.065					
Molybdenum	0.016	0.025- 0.064					
Boron	0.18	0.40- 3.0					
Iodine	0.18	0.25- 1.3					
Lithium	0.007	0.007- 0.023					
Phosphorus	155	160- 250					
Selenium	0.56	0.95- 1.7					
Strontium	1.3	0.30- 3.5					
Sulfur	42600	44500- 52000					
Barium	0.36	0.16- 1.6					
Cobalt	0.005	0.013- 0.035					
Iron	7.5	5.4- 13					
Germanium	0.027	0.045- 0.065					
Rubidium	< 0.003	0.011- 0.12					
Zirconium	0.042	0.020- 0.44					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 10/7/2006	Sample Size: 0.204 g			Ca/Mg	30.1	4- 30
Date Received: 10/18/2006	Sample Type: Head			Ca/P	4.47	0.8- 8
Date Completed: 10/20/2006	Hair Color: Blond			Na/K	2.2	0.5- 10
	Treatment:			Zn/Cu	16.7	4- 20
Methodology: ICP-MS	Shampoo: Senscience			Zn/Cd	> 999	> 800