

HAIR ELEMENTS



PATIENT: No 11
SEX: Male
AGE: 48
Location: Cape Town, South Africa

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	5.6	< 7.0		
Antimony	< 0.01	< 0.066		
Arsenic	0.15	< 0.080		
Beryllium	< 0.01	< 0.020		
Bismuth	0.002	< 0.060		
Cadmium	0.033	< 0.15		
Lead	0.10	< 2.0		
Mercury	1.9	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.003	< 0.060		
Nickel	0.10	< 0.40		
Silver	0.11	< 0.12		
Tin	0.04	< 0.30		
Titanium	0.51	< 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	147	200- 750					
Magnesium	10	25- 75					
Sodium	58	12- 90					
Potassium	48	9- 40					
Copper	26	10- 28					
Zinc	170	130- 200					
Manganese	0.09	0.15- 0.65					
Chromium	0.41	0.20- 0.40					
Vanadium	0.029	0.018- 0.065					
Molybdenum	0.022	0.025- 0.064					
Boron	0.49	0.40- 3.0					
Iodine	2.7	0.25- 1.3					
Lithium	0.006	0.007- 0.023					
Phosphorus	169	160- 250					
Selenium	0.92	0.95- 1.7					
Strontium	0.18	0.30- 3.5					
Sulfur	48000	44500- 52000					
Barium	0.24	0.16- 1.6					
Cobalt	0.053	0.013- 0.035					
Iron	5.3	5.4- 13					
Germanium	0.032	0.045- 0.065					
Rubidium	0.060	0.011- 0.12					
Zirconium	0.49	0.020- 0.44					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 8/19/2006	Sample Size: 0.198 g			Ca/Mg	14.7	4- 30
Date Received: 9/7/2006	Sample Type: Head			Ca/P	0.87	0.8- 8
Date Completed: 9/13/2006	Hair Color: Brown			Na/K	1.21	0.5- 10
	Treatment:			Zn/Cu	6.54	4- 20
Methodology: ICP-MS	Shampoo: Commercial			Zn/Cd	> 999	> 800

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