

HAIR ELEMENTS



PATIENT: No 8
SEX: Female
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	4.8	< 7.0		
Antimony	0.023	< 0.050		
Arsenic	0.023	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.004	< 0.10		
Cadmium	0.064	< 0.10		
Lead	0.51	< 1.0		
Mercury	4.3	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.009	< 0.060		
Nickel	0.20	< 0.40		
Silver	0.20	< 0.15		
Tin	0.39	< 0.30		
Titanium	1.4	< 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	1630	300- 1200					
Magnesium	48	35- 120					
Sodium	52	12- 90					
Potassium	17	8- 38					
Copper	9.5	12- 35					
Zinc	180	140- 220					
Manganese	0.09	0.15- 0.65					
Chromium	0.33	0.20- 0.40					
Vanadium	0.030	0.018- 0.065					
Molybdenum	0.022	0.028- 0.056					
Boron	0.47	0.30- 2.0					
Iodine	0.94	0.25- 1.3					
Lithium	0.039	0.007- 0.023					
Phosphorus	213	160- 250					
Selenium	0.93	0.95- 1.7					
Strontium	3.6	0.50- 7.6					
Sulfur	49300	44500- 52000					
Barium	0.54	0.26- 3.0					
Cobalt	0.023	0.013- 0.050					
Iron	8.1	5.4- 14					
Germanium	0.028	0.045- 0.065					
Rubidium	0.013	0.007- 0.096					
Zirconium	0.053	0.020- 0.42					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 8/19/2006	Sample Size: 0.203 g			Ca/Mg	34	4- 30
Date Received: 9/7/2006	Sample Type: Head			Ca/P	7.65	1- 12
Date Completed: 9/13/2006	Hair Color: Brown			Na/K	3.06	0.5- 10
	Treatment: Dye			Zn/Cu	18.9	4- 20
Methodology: ICP-MS	Shampoo: Wella			Zn/Cd	> 999	> 800

V06.99