

HAIR ELEMENTS



PATIENT: Number 45
SEX: Female
AGE: 49
Location: Cape Town, South Africa

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	5.3	< 7.0		
Antimony	0.027	< 0.050		
Arsenic	0.034	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.069	< 0.10		
Cadmium	0.010	< 0.10		
Lead	0.90	< 1.0		
Mercury	2.0	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	< 0.001	< 0.060		
Nickel	0.14	< 0.40		
Silver	0.15	< 0.15		
Tin	0.25	< 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	396	300- 1200					
Magnesium	33	35- 120					
Sodium	200	12- 90					
Potassium	58	8- 38					
Copper	12	12- 35					
Zinc	170	140- 220					
Manganese	0.11	0.15- 0.65					
Chromium	0.32	0.20- 0.40					
Vanadium	0.028	0.018- 0.065					
Molybdenum	0.031	0.028- 0.056					
Boron	0.62	0.30- 2.0					
Iodine	0.58	0.25- 1.3					
Lithium	0.020	0.007- 0.023					
Phosphorus	208	160- 250					
Selenium	0.54	0.95- 1.7					
Strontium	0.66	0.50- 7.6					
Sulfur	47900	44500- 52000					
Barium	0.79	0.26- 3.0					
Cobalt	0.022	0.013- 0.050					
Iron	4.2	5.4- 14					
Germanium	0.035	0.045- 0.065					
Rubidium	0.080	0.007- 0.096					
Zirconium	0.038	0.020- 0.42					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 12/1/2006	Sample Size: 0.202 g					
Date Received: 12/13/2006	Sample Type: Head			Ca/Mg	12	4- 30
Date Completed: 12/16/2006	Hair Color: Brown			Ca/P	1.9	1- 12
	Treatment: Dye			Na/K	3.45	0.5- 10
	Shampoo: Pantene			Zn/Cu	14.2	4- 20
Methodology: ICP-MS				Zn/Cd	> 999	> 800

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