

HAIR ELEMENTS



PATIENT: Number 152
SEX: Female
AGE: 33 Location: PE, RSA

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	3.1	< 7.0		
Antimony	< 0.01	< 0.050		
Arsenic	0.069	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.015	< 2.0		
Cadmium	0.16	< 0.10		
Lead	0.31	< 1.0		
Mercury	0.58	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.022	< 0.060		
Nickel	0.19	< 0.40		
Silver	0.02	< 0.15		
Tin	0.15	< 0.30		
Titanium	0.79	< 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	632	300- 1200					
Magnesium	180	35- 120					
Sodium	110	12- 90					
Potassium	13	8- 38					
Copper	40	12- 35					
Zinc	220	140- 220					
Manganese	0.28	0.15- 0.65					
Chromium	0.56	0.20- 0.40					
Vanadium	0.048	0.018- 0.065					
Molybdenum	0.020	0.028- 0.056					
Boron	0.90	0.30- 2.0					
Iodine	0.43	0.25- 1.3					
Lithium	0.009	0.007- 0.023					
Phosphorus	159	160- 250					
Selenium	0.68	0.95- 1.7					
Strontium	2.6	0.50- 7.6					
Sulfur	46300	44500- 52000					
Barium	0.42	0.26- 3.0					
Cobalt	0.012	0.013- 0.050					
Iron	15	5.4- 14					
Germanium	0.044	0.045- 0.065					
Rubidium	0.006	0.007- 0.096					
Zirconium	0.008	0.020- 0.42					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 2/10/2008	Sample Size: 0.205 g			Ca/Mg	3.51	4- 30
Date Received: 2/25/2008	Sample Type: Head			Ca/P	3.97	1- 12
Date Completed: 3/3/2008	Hair Color: Blond			Na/K	8.46	0.5- 10
	Treatment:			Zn/Cu	5.5	4- 20
Methodology: ICP-MS	Shampoo: Guss			Zn/Cd	> 999	> 800

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