

HAIR ELEMENTS



PATIENT: Number 122
SEX: Female
AGE: 36
Location: Cape Town, RSA

POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	5.3	< 7.0		
Antimony	0.025	< 0.050		
Arsenic	0.042	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.015	< 2.0		
Cadmium	0.067	< 0.10		
Lead	0.22	< 1.0		
Mercury	2.0	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.003	< 0.060		
Nickel	0.19	< 0.40		
Silver	0.02	< 0.15		
Tin	0.11	< 0.30		
Titanium	0.68	< 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	1480	300- 1200					
Magnesium	57	35- 120					
Sodium	140	12- 90					
Potassium	19	8- 38					
Copper	14	12- 35					
Zinc	200	140- 220					
Manganese	0.18	0.15- 0.65					
Chromium	0.47	0.20- 0.40					
Vanadium	0.045	0.018- 0.065					
Molybdenum	0.025	0.028- 0.056					
Boron	0.51	0.30- 2.0					
Iodine	0.40	0.25- 1.3					
Lithium	0.007	0.007- 0.023					
Phosphorus	235	160- 250					
Selenium	0.68	0.95- 1.7					
Strontium	2.8	0.50- 7.6					
Sulfur	57100	44500- 52000					
Barium	0.59	0.26- 3.0					
Cobalt	0.050	0.013- 0.050					
Iron	15	5.4- 14					
Germanium	0.041	0.045- 0.065					
Rubidium	0.008	0.007- 0.096					
Zirconium	0.14	0.020- 0.42					

SPECIMEN DATA

COMMENTS:
 Date Collected: 10/10/2007 Sample Size: 0.145 g
 Date Received: 10/11/2007 Sample Type: Head
 Date Completed: 10/14/2007 Hair Color: Brown
 Treatment: Bleach, Dye
 Methodology: ICP-MS Shampoo: Loreal

RATIOS

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	26	4- 30
Ca/P	6.3	1- 12
Na/K	7.37	0.5- 10
Zn/Cu	14.3	4- 20
Zn/Cd	> 999	> 800

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