

HAIR ELEMENTS



PATIENT: Number 69
SEX: Female
AGE: 36
 Location: Cape Town, South Africa

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	9.3	< 7.0		
Antimony	0.015	< 0.050		
Arsenic	0.036	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.010	< 0.10		
Cadmium	0.010	< 0.10		
Lead	0.09	< 1.0		
Mercury	0.77	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.005	< 0.060		
Nickel	0.15	< 0.40		
Silver	0.09	< 0.15		
Tin	0.10	< 0.30		
Titanium	1.5	< 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	945	300- 1200					
Magnesium	54	35- 120					
Sodium	42	12- 90					
Potassium	18	8- 38					
Copper	13	12- 35					
Zinc	260	140- 220					
Manganese	0.11	0.15- 0.65					
Chromium	0.44	0.20- 0.40					
Vanadium	0.022	0.018- 0.065					
Molybdenum	0.043	0.028- 0.056					
Boron	0.81	0.30- 2.0					
Iodine	0.81	0.25- 1.3					
Lithium	0.037	0.007- 0.023					
Phosphorus	211	160- 250					
Selenium	0.77	0.95- 1.7					
Strontium	1.8	0.50- 7.6					
Sulfur	53200	44500- 52000					
Barium	0.58	0.26- 3.0					
Cobalt	0.11	0.013- 0.050					
Iron	11	5.4- 14					
Germanium	0.031	0.045- 0.065					
Rubidium	0.015	0.007- 0.096					
Zirconium	0.69	0.020- 0.42					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 2/21/2007	Sample Size: 0.192 g			Ca/Mg	17.5	4- 30
Date Received: 2/28/2007	Sample Type: Head			Ca/P	4.48	1- 12
Date Completed: 3/5/2007	Hair Color: Black			Na/K	2.33	0.5- 10
	Treatment:			Zn/Cu	20	4- 20
Methodology: ICP-MS	Shampoo:			Zn/Cd	> 999	> 800

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