

HAIR ELEMENTS



Name: Patient 16
 Age: 37
 Location: Cape Town, South Africa

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	3.2	< 7.0		
Antimony	0.010	< 0.050		
Arsenic	0.022	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.002	< 0.10		
Cadmium	0.023	< 0.10		
Lead	0.19	< 1.0		
Mercury	1.3	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.009	< 0.060		
Nickel	0.17	< 0.40		
Silver	0.06	< 0.15		
Tin	0.13	< 0.30		
Titanium	0.38	< 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	1600	300- 1200					
Magnesium	100	35- 120					
Sodium	160	12- 90					
Potassium	24	8- 38					
Copper	13	12- 35					
Zinc	340	140- 220					
Manganese	0.26	0.15- 0.65					
Chromium	0.30	0.20- 0.40					
Vanadium	0.027	0.018- 0.065					
Molybdenum	0.022	0.028- 0.056					
Boron	0.53	0.30- 2.0					
Iodine	0.75	0.25- 1.3					
Lithium	0.004	0.007- 0.023					
Phosphorus	188	160- 250					
Selenium	0.68	0.95- 1.7					
Strontium	3.8	0.50- 7.6					
Sulfur	47100	44500- 52000					
Barium	0.58	0.26- 3.0					
Cobalt	0.011	0.013- 0.050					
Iron	6.6	5.4- 14					
Germanium	0.032	0.045- 0.065					
Rubidium	0.024	0.007- 0.096					
Zirconium	0.075	0.020- 0.42					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 9/16/2006	Sample Size: 0.2 g			Ca/Mg	16	4- 30
Date Received: 9/26/2006	Sample Type: Head			Ca/P	8.51	1- 12
Date Completed: 9/30/2006	Hair Color: Brown			Na/K	6.67	0.5- 10
	Treatment: Dye			Zn/Cu	26.2	4- 20
Methodology: ICP-MS	Shampoo: Head And Shoulder			Zn/Cd	> 999	> 800