

HAIR ELEMENTS



PATIENT: Number 99
SEX: Female
AGE: 56
Location: Cape Town; South Africa

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	16	< 7.0		
Antimony	0.031	< 0.050		
Arsenic	0.039	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.019	< 2.0		
Cadmium	0.053	< 0.10		
Lead	0.21	< 1.0		
Mercury	0.37	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.008	< 0.060		
Nickel	0.20	< 0.40		
Silver	0.03	< 0.15		
Tin	0.18	< 0.30		
Titanium	0.29	< 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	479	300- 1200					
Magnesium	22	35- 120					
Sodium	14	12- 90					
Potassium	11	8- 38					
Copper	14	12- 35					
Zinc	130	140- 220					
Manganese	0.12	0.15- 0.65					
Chromium	0.48	0.20- 0.40					
Vanadium	0.038	0.018- 0.065					
Molybdenum	0.076	0.028- 0.056					
Boron	0.53	0.30- 2.0					
Iodine	0.20	0.25- 1.3					
Lithium	0.011	0.007- 0.023					
Phosphorus	195	160- 250					
Selenium	0.92	0.95- 1.7					
Strontium	0.80	0.50- 7.6					
Sulfur	46100	44500- 52000					
Barium	0.52	0.26- 3.0					
Cobalt	0.048	0.013- 0.050					
Iron	8.0	5.4- 14					
Germanium	0.030	0.045- 0.065					
Rubidium	0.009	0.007- 0.096					
Zirconium	0.049	0.020- 0.42					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 6/15/2007	Sample Size: 0.205 g					
Date Received: 7/3/2007	Sample Type: Head			Ca/Mg	21.8	4- 30
Date Completed: 7/12/2007	Hair Color:			Ca/P	2.46	1- 12
	Treatment:			Na/K	1.27	0.5- 10
Methodology: ICP-MS	Shampoo: Pantene			Zn/Cu	9.29	4- 20
				Zn/Cd	> 999	> 800