

HAIR ELEMENTS



PATIENT: Number 78
SEX: Female
AGE: 32
Location: Cape Town, South Africa

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	20	< 7.0		
Antimony	0.052	< 0.050		
Arsenic	0.035	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.26	< 2.0		
Cadmium	0.052	< 0.10		
Lead	0.43	< 1.0		
Mercury	1.5	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.002	< 0.060		
Nickel	1.3	< 0.40		
Silver	2.7	< 0.15		
Tin	0.32	< 0.30		
Titanium	2.6	< 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	225	300- 1200					
Magnesium	15	35- 120					
Sodium	280	12- 90					
Potassium	230	8- 38					
Copper	21	12- 35					
Zinc	130	140- 220					
Manganese	0.25	0.15- 0.65					
Chromium	0.52	0.20- 0.40					
Vanadium	0.078	0.018- 0.065					
Molybdenum	0.046	0.028- 0.056					
Boron	1.1	0.30- 2.0					
Iodine	0.63	0.25- 1.3					
Lithium	0.008	0.007- 0.023					
Phosphorus	158	160- 250					
Selenium	0.73	0.95- 1.7					
Strontium	0.60	0.50- 7.6					
Sulfur	47400	44500- 52000					
Barium	0.31	0.26- 3.0					
Cobalt	0.016	0.013- 0.050					
Iron	17	5.4- 14					
Germanium	0.036	0.045- 0.065					
Rubidium	0.23	0.007- 0.096					
Zirconium	2.9	0.020- 0.42					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 4/23/2007	Sample Size: 0.199 g			Ca/Mg	15	4- 30
Date Received: 5/2/2007	Sample Type: Head			Ca/P	1.42	1- 12
Date Completed: 5/5/2007	Hair Color: Brown			Na/K	1.22	0.5- 10
	Treatment:			Zn/Cu	6.19	4- 20
Methodology: ICP-MS	Shampoo: Pantene			Zn/Cd	> 999	> 800