

HAIR ELEMENTS



PATIENT: Number 213
SEX: Female
AGE: 57
LOCATION: Port Elizabeth, RSA

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	12	< 7.0		
Antimony	0.028	< 0.050		
Arsenic	0.076	< 0.060		
Beryllium	0.018	< 0.020		
Bismuth	0.009	< 2.0		
Cadmium	0.041	< 0.10		
Lead	3.2	< 1.0		
Mercury	0.19	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	0.002	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.006	< 0.060		
Nickel	0.54	< 0.40		
Silver	1.2	< 0.15		
Tin	0.05	< 0.30		
Titanium	0.30	< 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	466	300- 1200					
Magnesium	110	35- 120					
Sodium	1400	12- 90					
Potassium	160	8- 38					
Copper	77	12- 35					
Zinc	200	140- 220					
Manganese	3.0	0.15- 0.65					
Chromium	0.31	0.20- 0.40					
Vanadium	0.036	0.018- 0.065					
Molybdenum	0.025	0.028- 0.056					
Boron	8.9	0.30- 2.0					
Iodine	0.15	0.25- 1.3					
Lithium	0.005	0.007- 0.023					
Phosphorus	176	160- 250					
Selenium	1.7	0.95- 1.7					
Strontium	2.3	0.50- 7.6					
Sulfur	47000	44500- 52000					
Barium	110	0.26- 3.0					
Cobalt	0.072	0.013- 0.050					
Iron	13	5.4- 14					
Germanium	0.023	0.045- 0.065					
Rubidium	0.18	0.007- 0.096					
Zirconium	0.064	0.020- 0.42					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 10/4/2008	Sample Size: 0.202 g			Ca/Mg	4.24	4- 30
Date Received: 10/17/2008	Sample Type: Head			Ca/P	2.65	1- 12
Date Completed: 10/20/2008	Hair Color: Brown			Na/K	8.75	0.5- 10
	Treatment: Dye			Zn/Cu	2.6	4- 20
Methodology: ICP-MS	Shampoo: Gaia Organics			Zn/Cd	> 999	> 800