

HAIR ELEMENTS



PATIENT: Number 44
SEX: Female
AGE: 78
Location: Cape Town, South Africa

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	3.3	< 7.0		
Antimony	< 0.01	< 0.050		
Arsenic	0.023	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.050	< 0.10		
Cadmium	0.010	< 0.10		
Lead	0.11	< 1.0		
Mercury	0.10	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.001	< 0.060		
Nickel	0.07	< 0.40		
Silver	0.13	< 0.15		
Tin	0.03	< 0.30		
Titanium	0.39	< 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	906	300- 1200					
Magnesium	63	35- 120					
Sodium	21	12- 90					
Potassium	< 3	8- 38					
Copper	15	12- 35					
Zinc	190	140- 220					
Manganese	0.08	0.15- 0.65					
Chromium	0.28	0.20- 0.40					
Vanadium	0.016	0.018- 0.065					
Molybdenum	0.030	0.028- 0.056					
Boron	0.15	0.30- 2.0					
Iodine	0.40	0.25- 1.3					
Lithium	0.011	0.007- 0.023					
Phosphorus	170	160- 250					
Selenium	0.85	0.95- 1.7					
Strontium	2.2	0.50- 7.6					
Sulfur	49300	44500- 52000					
Barium	1.9	0.26- 3.0					
Cobalt	0.006	0.013- 0.050					
Iron	5.0	5.4- 14					
Germanium	0.039	0.045- 0.065					
Rubidium	0.007	0.007- 0.096					
Zirconium	0.26	0.020- 0.42					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected:	11/7/2006	Sample Size:	0.203 g	Ca/Mg	14.4	4- 30
Date Received:	12/13/2006	Sample Type:	Head	Ca/P	5.33	1- 12
Date Completed:	12/16/2006	Hair Color:	Brown	Na/K	7	0.5- 10
		Treatment:	Dye	Zn/Cu	12.7	4- 20
Methodology:	ICP-MS	Shampoo:	Nioxin	Zn/Cd	> 999	> 800

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