

# HAIR ELEMENTS



PATIENT Number 60

SEX: Female

AGE: 65

Location: London, UK (9 months) and Cape Town South Africa (3 months)

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 <sup>th</sup>	95 <sup>th</sup>
Aluminum	19	< 7.0		
Antimony	0.035	< 0.050		
Arsenic	0.050	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.053	< 0.10		
Cadmium	0.047	< 0.10		
Lead	0.55	< 1.0		
Mercury	1.8	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.006	< 0.060		
Nickel	0.12	< 0.40		
Silver	0.21	< 0.15		
Tin	0.15	< 0.30		
Titanium	0.58	< 1.0		
Total Toxic Representation				

ESSENTIAL AND OTHER ELEMENTS							
ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE				
			2.5 <sup>th</sup>	16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup>	97.5 <sup>th</sup>
Calcium	568	300- 1200					
Magnesium	22	35- 120					
Sodium	140	12- 90					
Potassium	6	8- 38					
Copper	17	12- 35					
Zinc	220	140- 220					
Manganese	0.11	0.15- 0.65					
Chromium	0.40	0.20- 0.40					
Vanadium	0.045	0.018- 0.065					
Molybdenum	0.093	0.028- 0.056					
Boron	2.4	0.30- 2.0					
Iodine	0.33	0.25- 1.3					
Lithium	0.010	0.007- 0.023					
Phosphorus	173	160- 250					
Selenium	1.0	0.95- 1.7					
Strontium	1.5	0.50- 7.6					
Sulfur	48500	44500- 52000					
Barium	0.74	0.26- 3.0					
Cobalt	0.031	0.013- 0.050					
Iron	3.0	5.4- 14					
Germanium	0.026	0.045- 0.065					
Rubidium	0.016	0.007- 0.096					
Zirconium	0.093	0.020- 0.42					

SPECIMEN DATA				RATIOS		
<b>COMMENTS:</b>				<b>ELEMENTS</b>	<b>RATIOS</b>	<b>EXPECTED RANGE</b>
Date Collected: 2/3/2007	Sample Size: 0.156 g			Ca/Mg	25.8	4- 30
Date Received: 2/7/2007	Sample Type: Head			Ca/P	3.28	1- 12
Date Completed: 2/10/2007	Hair Color: Black			Na/K	23.3	0.5- 10
	Treatment:			Zn/Cu	12.9	4- 20
Methodology: ICP-MS	Shampoo: Tea Tree			Zn/Cd	> 999	> 800

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