

# HAIR ELEMENTS



**PATIENT: Number 83**  
**SEX: Female**  
**AGE: 59**

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 <sup>th</sup>	95 <sup>th</sup>
Aluminum	3.8	< 7.0		
Antimony	0.029	< 0.050		
Arsenic	0.11	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.004	< 2.0		
Cadmium	0.087	< 0.10		
Lead	6.3	< 1.0		
Mercury	0.70	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.034	< 0.060		
Nickel	0.11	< 0.40		
Silver	0.35	< 0.15		
Tin	0.09	< 0.30		
Titanium	0.32	< 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	877	300- 1200					
Magnesium	110	35- 120					
Sodium	43	12- 90					
Potassium	5	8- 38					
Copper	12	12- 35					
Zinc	230	140- 220					
Manganese	0.07	0.15- 0.65					
Chromium	0.41	0.20- 0.40					
Vanadium	0.054	0.018- 0.065					
Molybdenum	0.023	0.028- 0.056					
Boron	0.63	0.30- 2.0					
Iodine	0.22	0.25- 1.3					
Lithium	0.004	0.007- 0.023					
Phosphorus	168	160- 250					
Selenium	0.84	0.95- 1.7					
Strontium	2.4	0.50- 7.6					
Sulfur	51900	44500- 52000					
Barium	0.23	0.26- 3.0					
Cobalt	0.006	0.013- 0.050					
Iron	14	5.4- 14					
Germanium	0.031	0.045- 0.065					
Rubidium	0.005	0.007- 0.096					
Zirconium	0.011	0.020- 0.42					

SPECIMEN DATA				RATIOS		
<b>COMMENTS:</b>				<b>ELEMENTS</b>	<b>RATIOS</b>	<b>EXPECTED RANGE</b>
Date Collected: 5/7/2007	Sample Size: 0.2 g			Ca/Mg	7.97	4- 30
Date Received: 5/11/2007	Sample Type: Head			Ca/P	5.22	1- 12
Date Completed: 5/16/2007	Hair Color: Brown			Na/K	8.6	0.5- 10
	Treatment:			Zn/Cu	19.2	4- 20
Methodology: ICP-MS	Shampoo: Jj Baby			Zn/Cd	> 999	> 800

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