

# HAIR ELEMENTS



**PATIENT:** Number 52  
**SEX:** Female  
**AGE:** 50  
**Location:** Los Altos, CA, USA

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 <sup>th</sup>	95 <sup>th</sup>
Aluminum	3.9	< 7.0		
Antimony	0.016	< 0.050		
Arsenic	0.037	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.067	< 0.10		
Cadmium	< 0.009	< 0.10		
Lead	0.85	< 1.0		
Mercury	< 0.03	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.29	< 0.060		
Nickel	0.51	< 0.40		
Silver	0.04	< 0.15		
Tin	0.04	< 0.30		
Titanium	0.29	< 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	312	300- 1200					
Magnesium	89	35- 120					
Sodium	45	12- 90					
Potassium	8	8- 38					
Copper	87	12- 35					
Zinc	140	140- 220					
Manganese	0.61	0.15- 0.65					
Chromium	0.29	0.20- 0.40					
Vanadium	0.035	0.018- 0.065					
Molybdenum	0.18	0.028- 0.056					
Boron	0.50	0.30- 2.0					
Iodine	2.2	0.25- 1.3					
Lithium	0.006	0.007- 0.023					
Phosphorus	180	160- 250					
Selenium	1.1	0.95- 1.7					
Strontium	2.3	0.50- 7.6					
Sulfur	44100	44500- 52000					
Barium	0.80	0.26- 3.0					
Cobalt	0.009	0.013- 0.050					
Iron	5.1	5.4- 14					
Germanium	0.028	0.045- 0.065					
Rubidium	0.009	0.007- 0.096					
Zirconium	0.069	0.020- 0.42					

SPECIMEN DATA				RATIOS		
<b>COMMENTS:</b>				<b>ELEMENTS</b>	<b>RATIOS</b>	<b>EXPECTED RANGE</b>
Date Collected:	11/27/2006	Sample Size:	0.197 g	Ca/Mg	3.51	4- 30
Date Received:	11/29/2006	Sample Type:	Head	Ca/P	1.73	1- 12
Date Completed:	12/4/2006	Hair Color:	Brown	Na/K	5.63	0.5- 10
		Treatment:		Zn/Cu	1.61	4- 20
Methodology:	ICP-MS	Shampoo:	Earth Science	Zn/Cd	> 999	> 800
			V06.99			