

# HAIR ELEMENTS



**PATIENT:** No 18  
**SEX:** Male  
**AGE:** 44

## POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 <sup>th</sup>	95 <sup>th</sup>
Aluminum	5.4	< 7.0		
Antimony	0.040	< 0.066		
Arsenic	0.036	< 0.080		
Beryllium	< 0.01	< 0.020		
Bismuth	0.036	< 0.060		
Cadmium	0.070	< 0.15		
Lead	0.33	< 2.0		
Mercury	1.7	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.013	< 0.060		
Nickel	0.38	< 0.40		
Silver	0.36	< 0.12		
Tin	0.11	< 0.30		
Titanium	0.52	< 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	1080	200- 750					
Magnesium	41	25- 75					
Sodium	31	12- 90					
Potassium	8	9- 40					
Copper	39	10- 28					
Zinc	210	130- 200					
Manganese	0.12	0.15- 0.65					
Chromium	0.31	0.20- 0.40					
Vanadium	0.021	0.018- 0.065					
Molybdenum	0.032	0.025- 0.064					
Boron	0.20	0.40- 3.0					
Iodine	0.66	0.25- 1.3					
Lithium	0.014	0.007- 0.023					
Phosphorus	199	160- 250					
Selenium	0.93	0.95- 1.7					
Strontium	1.4	0.30- 3.5					
Sulfur	48300	44500- 52000					
Barium	1.2	0.16- 1.6					
Cobalt	0.70	0.013- 0.035					
Iron	8.7	5.4- 13					
Germanium	0.032	0.045- 0.065					
Rubidium	0.006	0.011- 0.12					
Zirconium	0.70	0.020- 0.44					

### SPECIMEN DATA

**COMMENTS:**  
 Date Collected: 9/26/2006      Sample Size: 0.195 g  
 Date Received: 10/2/2006      Sample Type: Head  
 Date Completed: 10/5/2006      Hair Color: Brown  
    Treatment:  
 Methodology: ICP-MS              Shampoo: Radox Body

V06.99

### RATIOS

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	26.3	4- 30
Ca/P	5.43	0.8- 8
Na/K	3.88	0.5- 10
Zn/Cu	5.38	4- 20
Zn/Cd	> 999	> 800