

HAIR ELEMENTS



PATIENT: Number 157
SEX: Female
AGE: 38
Location: Pittsburgh, PA, USA

POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	3.9	< 12		
Antimony	0.025	< 0.060		
Arsenic	0.032	< 0.090		
Beryllium	< 0.01	< 0.020		
Bismuth	0.35	< 2.0		
Cadmium	0.021	< 0.10		
Lead	0.12	< 1.0		
Mercury	< 0.03	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.008	< 0.060		
Nickel	0.06	< 0.40		
Silver	0.03	< 0.10		
Tin	0.12	< 0.30		
Titanium	0.71	< 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	233	475- 1500					
Magnesium	38	45- 180					
Sodium	370	24- 180					
Potassium	34	20- 80					
Copper	13	9.0- 24					
Zinc	180	130- 200					
Manganese	0.11	0.20- 0.65					
Chromium	0.35	0.20- 0.45					
Vanadium	0.024	0.018- 0.065					
Molybdenum	0.055	0.040- 0.10					
Boron	0.75	0.70- 4.0					
Iodine	0.24	0.25- 1.3					
Lithium	0.015	0.008- 0.040					
Phosphorus	254	350- 600					
Selenium	1.3	0.95- 1.7					
Strontium	0.28	1.0- 8.0					
Sulfur	44300	43000- 50000					
Barium	0.18	0.50- 5.0					
Cobalt	0.007	0.013- 0.050					
Iron	15	5.8- 14					
Germanium	0.034	0.045- 0.065					
Rubidium	0.025	0.030- 0.25					
Zirconium	0.69	0.040- 1.0					

SPECIMEN DATA

COMMENTS:
 Date Collected: 3/28/2008 Sample Size: 0.203 g
 Date Received: 4/2/2008 Sample Type: Pubic
 Date Completed: 4/4/2008 Hair Color:
 Treatment:
 Methodology: ICP-MS Shampoo:

RATIOS

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	6.13	4- 30
Ca/P	0.917	1- 12
Na/K	10.9	0.5- 10
Zn/Cu	13.8	4- 20
Zn/Cd	> 999	> 800

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