

HAIR ELEMENTS



PATIENT: Number 151
SEX: Male
AGE: 13 Lake Ontario, Canada

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	3.6	< 8.0	██████████	
Antimony	0.010	< 0.066	●	
Arsenic	0.042	< 0.080	██████████	
Beryllium	< 0.01	< 0.020		
Bismuth	0.023	< 2.0	●	
Cadmium	< 0.009	< 0.15		
Lead	0.23	< 1.5	██████	
Mercury	0.27	< 0.40	██████████	
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.008	< 0.060	████	
Nickel	< 0.01	< 0.40		
Silver	0.01	< 0.13	●	
Tin	0.08	< 0.30	██████	
Titanium	0.78	< 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	244	200- 700		██████████			
Magnesium	9	18- 70		██████████			
Sodium	100	12- 90		██████████			
Potassium	50	10- 40		██████████			
Copper	11	10- 30		██████████			
Zinc	180	130- 200		██████████			
Manganese	0.06	0.15- 0.65	██████████				
Chromium	0.26	0.20- 0.40		██████████			
Vanadium	0.021	0.020- 0.075		██████████			
Molybdenum	0.030	0.031- 0.062		██████████			
Boron	0.19	0.34- 3.0		██████████			
Iodine	0.27	0.25- 1.3		██████████			
Lithium	< 0.004	0.007- 0.023	██████████				
Phosphorus	184	160- 250		██████████			
Selenium	0.92	0.95- 1.7		██████████			
Strontium	0.34	0.30- 3.2		██████████			
Sulfur	48600	44000- 52000		████			
Barium	0.21	0.17- 1.5		██████████			
Cobalt	0.002	0.013- 0.035	██████████				
Iron	8.8	5.8- 13		████			
Germanium	0.035	0.045- 0.065		██████████			
Rubidium	0.036	0.009- 0.090		████			
Zirconium	0.099	0.047- 0.70		██████████			

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 1/15/2008	Sample Size: 0.197 g			Ca/Mg	27.1	4- 30
Date Received: 1/22/2008	Sample Type: Head			Ca/P	1.33	0.8- 8
Date Completed: 1/25/2008	Hair Color: Brown			Na/K	2	0.5- 10
	Treatment:			Zn/Cu	16.4	4- 20
Methodology: ICP-MS	Shampoo: Life Brand			Zn/Cd	> 999	> 800

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