

HAIR ELEMENTS



PATIENT: Number 271

SEX: Female

AGE: 9

LOCATION: Ann Arbor, Michigan, USA.

POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT µg/g	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	3.5	< 8.0		
Antimony	0.035	< 0.066		
Arsenic	0.068	< 0.060		
Barium	0.39	< 1.5		
Beryllium	< 0.01	< 0.020		
Bismuth	0.022	< 2.0		
Cadmium	0.057	< 0.070		
Lead	0.39	< 0.80		
Mercury	0.12	< 0.40		
Platinum	< 0.003	< 0.005		
Thallium	0.001	< 0.002		
Thorium	< 0.001	< 0.002		
Uranium	0.034	< 0.060		
Nickel	0.21	< 0.30		
Silver	0.11	< 0.18		
Tin	0.28	< 0.30		
Titanium	0.41	< 0.70		
Total Toxic Representation				

ESSENTIAL AND OTHER ELEMENTS

ELEMENTS	RESULT µg/g	REFERENCE RANGE	PERCENTILE				
			2.5 th	16 th	50 th	84 th	97.5 th
Calcium	470	250 - 800					
Magnesium	40	25 - 90					
Sodium	24	18 - 180					
Potassium	10	10 - 90					
Copper	15	11 - 37					
Zinc	160	120 - 220					
Manganese	0.13	0.08 - 0.60					
Chromium	0.38	0.40 - 0.65					
Vanadium	0.065	0.025 - 0.10					
Molybdenum	0.088	0.030 - 0.090					
Boron	1.3	0.30 - 1.7					
Iodine	3.6	0.25 - 1.3					
Lithium	< 0.004	0.007 - 0.020					
Phosphorus	164	150 - 220					
Selenium	0.91	0.70 - 1.1					
Strontium	1.4	0.37 - 3.6					
Sulfur	47500	44000 - 51000					
Cobalt	0.006	0.005 - 0.035					
Iron	8.6	7.0 - 16					
Germanium	0.027	0.030 - 0.040					
Rubidium	0.013	0.008 - 0.080					
Zirconium	0.35	0.030 - 0.40					

SPECIMEN DATA

COMMENTS:

Date Collected: 3/11/2009

Date Received: 3/14/2009

Date Completed: 3/17/2009

Client Reference:

Methodology: ICP-MS

Sample Size: 0.197 g

Sample Type: Head

Hair Color: Brown

Treatment:

Shampoo: Neutragena

V010.08

RATIOS

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	11.8	4 - 30
Ca/P	2.87	1 - 12
Na/K	2.4	0.5 - 10
Zn/Cu	10.7	4 - 20
Zn/Cd	> 999	> 800