

HAIR ELEMENTS



PATIENT: Number 294
SEX: Female
AGE: 39
LOCATION: Lawrence, KS, USA

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	7.0	< 7.0		
Antimony	0.013	< 0.050		
Arsenic	0.022	< 0.060		
Barium	1.1	< 2.0		
Beryllium	< 0.01	< 0.020		
Bismuth	0.069	< 2.0		
Cadmium	0.021	< 0.050		
Lead	0.06	< 0.60		
Mercury	0.26	< 0.80		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.002		
Thorium	< 0.001	< 0.002		
Uranium	0.051	< 0.060		
Nickel	0.11	< 0.30		
Silver	0.02	< 0.15		
Tin	0.19	< 0.30		
Titanium	0.76	< 0.70		
Total Toxic Representation				

ESSENTIAL AND OTHER ELEMENTS						
ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE			97.5 th
			2.5 th	16 th	50 th	
Calcium	986	300- 1200				
Magnesium	67	35- 120				
Sodium	11	20- 250				
Potassium	< 3	8- 75				
Copper	13	11- 37				
Zinc	210	140- 220				
Manganese	0.08	0.08- 0.60				
Chromium	0.26	0.40- 0.65				
Vanadium	0.017	0.018- 0.065				
Molybdenum	0.034	0.020- 0.050				
Boron	0.31	0.25- 1.5				
Iodine	0.58	0.25- 1.8				
Lithium	< 0.004	0.007- 0.020				
Phosphorus	217	150- 220				
Selenium	1.0	0.55- 1.1				
Strontium	2.5	0.50- 7.6				
Sulfur	49800	44000- 50000				
Cobalt	0.045	0.005- 0.040				
Iron	5.8	7.0- 16				
Germanium	0.031	0.030- 0.040				
Rubidium	0.004	0.007- 0.096				
Zirconium	0.21	0.020- 0.42				

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 6/4/2009	Sample Size: 0.185 g			Ca/Mg	14.7	4- 30
Date Received: 6/8/2009	Sample Type: Head			Ca/P	4.54	1- 12
Date Completed: 6/12/2009	Hair Color: Brown			Na/K	3.67	0.5- 10
Client Reference:	Treatment:			Zn/Cu	16.2	4- 20
Methodology: ICP-MS	Shampoo: Redken Colorsafe			Zn/Cd	> 999	> 800
	V010.08					