



SEX: Male  
AGE: 13

**Toxic & Essential Elements; Hair**

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)	2.4	< 8.0	
Antimony (Sb)	0.015	< 0.066	
Arsenic (As)	0.058	< 0.080	
Barium (Ba)	0.28	< 0.75	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	0.006	< 2.0	
Cadmium (Cd)	< 0.009	< 0.060	
Lead (Pb)	0.23	< 1.0	
Mercury (Hg)	2.5	< 0.40	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	< 0.001	< 0.002	
Uranium (U)	0.047	< 0.060	
Nickel (Ni)	0.08	< 0.20	
Silver (Ag)	0.06	< 0.10	
Tin (Sn)	0.07	< 0.30	
Titanium (Ti)	0.38	< 0.60	
Total Toxic Representation			

ESSENTIAL AND OTHER ELEMENTS					
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 2.5 <sup>th</sup> 16 <sup>th</sup> 50 <sup>th</sup> 84 <sup>th</sup> 97.5 <sup>th</sup>		
Calcium (Ca)	223	200- 700			
Magnesium (Mg)	25	18- 70			
Sodium (Na)	280	20- 200			
Potassium (K)	94	9- 80			
Copper (Cu)	13	11- 32			
Zinc (Zn)	160	150- 230			
Manganese (Mn)	0.10	0.08- 0.50			
Chromium (Cr)	0.38	0.40- 0.70			
Vanadium (V)	0.044	0.020- 0.075			
Molybdenum (Mo)	0.022	0.030- 0.060			
Boron (B)	1.5	0.34- 3.0			
Iodine (I)	0.55	0.25- 1.3			
Lithium (Li)	< 0.004	0.007- 0.020			
Phosphorus (P)	163	150- 220			
Selenium (Se)	0.74	0.70- 1.2			
Strontium (Sr)	0.53	0.30- 3.2			
Sulfur (S)	45400	44000- 50000			
Cobalt (Co)	0.005	0.004- 0.020			
Iron (Fe)	5.3	7.0- 16			
Germanium (Ge)	0.031	0.030- 0.040			
Rubidium (Rb)	0.11	0.009- 0.090			
Zirconium (Zr)	0.21	0.047- 0.70			

SPECIMEN DATA		RATIOS	
<b>COMMENTS:</b>		ELEMENTS	RATIOS
Date Collected: 12/27/2015		Ca/Mg	8.92
Date Received: 01/02/2016		Ca/P	1.37
Date Completed: 01/05/2016		Na/K	2.98
Methodology: ICP/MS		Zn/Cu	12.3
Sample Size: 0.199 g	Sample Type: Head	Zn/Cd	> 999
Hair Color: Brown	Treatment:	RANGE	
Shampoo: Organic Whole Foods		Ca/Mg	4- 30
		Ca/P	0.8- 8
		Na/K	0.5- 10
		Zn/Cu	4- 20
		Zn/Cd	> 800