



## Toxic & Essential Elements; Hair

TOXIC METALS				
		RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)	2.5	< 7.0		
Antimony (Sb)	0.019	< 0.066		
Arsenic (As)	0.12	< 0.080		
Barium (Ba)	0.12	< 1.0		
Beryllium (Be)	< 0.01	< 0.020		
Bismuth (Bi)	0.053	< 2.0		
Cadmium (Cd)	< 0.009	< 0.065		
Lead (Pb)	0.08	< 0.80		
Mercury (Hg)	0.55	< 0.80		
Platinum (Pt)	< 0.003	< 0.005		
Thallium (Tl)	< 0.001	< 0.002		
Thorium (Th)	< 0.001	< 0.002		
Uranium (U)	0.030	< 0.060		
Nickel (Ni)	0.03	< 0.20		
Silver (Ag)	0.06	< 0.08		
Tin (Sn)	0.10	< 0.30		
Titanium (Ti)	0.42	< 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)	540	200- 750		
Magnesium (Mg)	44	25- 75		
Sodium (Na)	74	20- 180		
Potassium (K)	80	9- 80		
Copper (Cu)	9.1	11- 30		
Zinc (Zn)	200	130- 200		
Manganese (Mn)	0.07	0.08- 0.50		
Chromium (Cr)	0.53	0.40- 0.70		
Vanadium (V)	0.068	0.018- 0.065		
Molybdenum (Mo)	0.041	0.025- 0.060		
Boron (B)	9.6	0.40- 3.0		
Iodine (I)	1.5	0.25- 1.8		
Lithium (Li)	0.021	0.007- 0.020		
Phosphorus (P)	231	150- 220		
Selenium (Se)	1.1	0.70- 1.2		
Strontium (Sr)	0.76	0.30- 3.5		
Sulfur (S)	50500	44000- 50000		
Cobalt (Co)	0.002	0.004- 0.020		
Iron (Fe)	7.2	7.0- 16		
Germanium (Ge)	0.031	0.030- 0.040		
Rubidium (Rb)	0.078	0.011- 0.12		
Zirconium (Zr)	0.39	0.020- 0.44		

SPECIMEN DATA		RATIOS		
<b>COMMENTS:</b>		ELEMENTS	RATIOS	RANGE
Date Collected: 12/2/2011	Sample Size: 0.197 g	Ca/Mg	12.3	4- 30
Date Received: 12/19/2011	Sample Type: Head	Ca/P	2.34	0.8- 8
Date Completed: 12/22/2011	Hair Color: Black	Na/K	0.925	0.5- 10
Methodology: ICP/MS	Treatment:	Zn/Cu	22	4- 20
	Shampoo:	Zn/Cd	> 999	> 800