



Toxic & Essential Elements; Hair

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 th 95 th
Aluminum (Al)	17	< 8.0	
Antimony (Sb)	0.096	< 0.066	
Arsenic (As)	0.27	< 0.080	
Barium (Ba)	0.39	< 0.50	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	0.033	< 2.0	
Cadmium (Cd)	0.054	< 0.070	
Lead (Pb)	4.6	< 1.0	
Mercury (Hg)	0.38	< 0.40	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	0.001	< 0.002	
Thorium (Th)	0.001	< 0.002	
Uranium (U)	0.58	< 0.060	
Nickel (Ni)	0.17	< 0.20	
Silver (Ag)	0.23	< 0.20	
Tin (Sn)	0.29	< 0.30	
Titanium (Ti)	0.71	< 1.0	
Total Toxic Representation			

ESSENTIAL AND OTHER ELEMENTS					
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 2.5 th 16 th 50 th 84 th 97.5 th		
Calcium (Ca)	920	125- 370			
Magnesium (Mg)	230	12- 30			
Sodium (Na)	64	20- 200			
Potassium (K)	31	12- 200			
Copper (Cu)	30	11- 18			
Zinc (Zn)	86	100- 190			
Manganese (Mn)	1.4	0.10- 0.50			
Chromium (Cr)	0.59	0.43- 0.80			
Vanadium (V)	0.28	0.030- 0.10			
Molybdenum (Mo)	0.15	0.050- 0.13			
Boron (B)	8.6	0.70- 5.0			
Iodine (I)	2.4	0.25- 1.3			
Lithium (Li)	0.045	0.007- 0.020			
Phosphorus (P)	200	150- 220			
Selenium (Se)	0.63	0.70- 1.1			
Strontium (Sr)	7.5	0.16- 1.0			
Sulfur (S)	46300	45500- 53000			
Cobalt (Co)	0.035	0.004- 0.020			
Iron (Fe)	19	7.0- 16			
Germanium (Ge)	0.034	0.030- 0.040			
Rubidium (Rb)	0.058	0.016- 0.18			
Zirconium (Zr)	0.61	0.040- 1.0			

SPECIMEN DATA		RATIOS	
COMMENTS:		ELEMENTS	RATIOS
Date Collected: 01/02/2019	Sample Size: 0.197 g	Ca/Mg	4
Date Received: 01/10/2019	Sample Type: Head	Ca/P	4.6
Date Completed: 01/11/2019	Hair Color:	Na/K	2.06
Methodology: ICP/MS	Treatment:	Zn/Cu	2.87
	Shampoo: Neutro	Zn/Cd	> 999
		RANGE	
			4- 30
			0.8- 8
			0.5- 10
			4- 20
			> 800