



PATIENT: Number 893
 SEX: Male
 AGE: 8

Toxic & Essential Elements; Hair

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 th 95 th
Aluminum (Al)	4.8	< 8.0	
Antimony (Sb)	0.047	< 0.066	
Arsenic (As)	0.055	< 0.080	
Barium (Ba)	0.53	< 0.75	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	0.080	< 2.0	
Cadmium (Cd)	0.031	< 0.070	
Lead (Pb)	0.37	< 1.0	
Mercury (Hg)	0.42	< 0.40	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	0.001	< 0.002	
Uranium (U)	0.001	< 0.060	
Nickel (Ni)	0.23	< 0.20	
Silver (Ag)	0.04	< 0.14	
Tin (Sn)	0.18	< 0.30	
Titanium (Ti)	0.55	< 0.70	
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)	805	160- 500	
Magnesium (Mg)	98	12- 50	
Sodium (Na)	8	20- 200	
Potassium (K)	< 3	12- 140	
Copper (Cu)	16	11- 32	
Zinc (Zn)	210	110- 190	
Manganese (Mn)	1.1	0.08- 0.50	
Chromium (Cr)	0.42	0.40- 0.70	
Vanadium (V)	0.019	0.025- 0.10	
Molybdenum (Mo)	0.047	0.040- 0.090	
Boron (B)	0.69	0.50- 3.5	
Iodine (I)	0.33	0.25- 1.3	
Lithium (Li)	< 0.004	0.007- 0.020	
Phosphorus (P)	150	150- 220	
Selenium (Se)	0.78	0.70- 1.1	
Strontium (Sr)	1.7	0.21- 2.1	
Sulfur (S)	47600	44000- 51000	
Cobalt (Co)	0.043	0.004- 0.020	
Iron (Fe)	16	7.0- 16	
Germanium (Ge)	0.025	0.030- 0.040	
Rubidium (Rb)	0.005	0.008- 0.080	
Zirconium (Zr)	0.58	0.060- 0.70	

SPECIMEN DATA		RATIOS		
COMMENTS:		ELEMENTS	RATIOS	RANGE
Date Collected: 03/26/2013	Sample Size: 0.202 g	Ca/Mg	8.21	4- 30
Date Received: 03/29/2013	Sample Type: Head	Ca/P	5.37	0.8- 8
Date Completed: 04/03/2013	Hair Color: Brown	Na/K	2.67	0.5- 10
Methodology: ICP/MS	Treatment:	Zn/Cu	13.1	4- 20
	Shampoo: Suave Kids	Zn/Cd	> 999	> 800