



PATIENT: Number 535
 SEX: Male
 AGE: 3

Toxic & Essential Elements; Hair

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 th 95 th
Aluminum (Al)	15	< 8.0	
Antimony (Sb)	0.013	< 0.066	
Arsenic (As)	0.043	< 0.080	
Barium (Ba)	0.39	< 0.50	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	0.008	< 2.0	
Cadmium (Cd)	< 0.009	< 0.070	
Lead (Pb)	0.22	< 1.0	
Mercury (Hg)	1.2	< 0.40	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	0.001	< 0.002	
Uranium (U)	0.017	< 0.060	
Nickel (Ni)	0.59	< 0.20	
Silver (Ag)	0.03	< 0.20	
Tin (Sn)	0.10	< 0.30	
Titanium (Ti)	0.46	< 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)	286	125- 370					
Magnesium (Mg)	150	12- 30					
Sodium (Na)	70	20- 200					
Potassium (K)	81	12- 200					
Copper (Cu)	16	11- 18					
Zinc (Zn)	130	100- 190					
Manganese (Mn)	0.23	0.10- 0.50					
Chromium (Cr)	0.35	0.43- 0.80					
Vanadium (V)	0.078	0.030- 0.10					
Molybdenum (Mo)	0.077	0.050- 0.13					
Boron (B)	1.2	0.70- 5.0					
Iodine (I)	0.35	0.25- 1.3					
Lithium (Li)	< 0.004	0.007- 0.020					
Phosphorus (P)	170	150- 220					
Selenium (Se)	0.89	0.70- 1.1					
Strontium (Sr)	0.31	0.16- 1.0					
Sulfur (S)	49500	45500- 53000					
Cobalt (Co)	0.012	0.004- 0.020					
Iron (Fe)	5.6	7.0- 16					
Germanium (Ge)	0.024	0.030- 0.040					
Rubidium (Rb)	0.089	0.016- 0.18					
Zirconium (Zr)	0.16	0.040- 1.0					

SPECIMEN DATA		RATIOS		
COMMENTS:		ELEMENTS	RATIOS	RANGE
Date Collected: 8/11/2011	Sample Size: 0.196 g	Ca/Mg	1.91	4- 30
Date Received: 8/17/2011	Sample Type: Head	Ca/P	1.68	0.8- 8
Date Completed: 8/19/2011	Hair Color:	Na/K	0.864	0.5- 10
Methodology: ICP/MS	Treatment:	Zn/Cu	8.13	4- 20
	Shampoo:	Zn/Cd	> 999	> 800