



PATIENT: Number 615
 SEX: Male
 AGE: 51

Toxic & Essential Elements; Hair

TOXIC METALS				
		RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 th 95 th
Aluminum (Al)		2.4	< 7.0	
Antimony (Sb)		< 0.01	< 0.066	
Arsenic (As)		0.035	< 0.080	
Barium (Ba)		0.12	< 1.0	
Beryllium (Be)		< 0.01	< 0.020	
Bismuth (Bi)		0.071	< 2.0	
Cadmium (Cd)		< 0.009	< 0.065	
Lead (Pb)		0.59	< 0.80	
Mercury (Hg)		0.43	< 0.80	
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)		0.18	< 0.20	
Silver (Ag)		0.01	< 0.08	
Tin (Sn)		0.02	< 0.30	
Titanium (Ti)		0.29	< 0.60	
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)		524	200- 750		
Magnesium (Mg)		25	25- 75		
Sodium (Na)		37	20- 180		
Potassium (K)		17	9- 80		
Copper (Cu)		16	11- 30		
Zinc (Zn)		240	130- 200		
Manganese (Mn)		0.06	0.08- 0.50		
Chromium (Cr)		0.42	0.40- 0.70		
Vanadium (V)		0.011	0.018- 0.065		
Molybdenum (Mo)		0.087	0.025- 0.060		
Boron (B)		0.20	0.40- 3.0		
Iodine (I)		0.18	0.25- 1.8		
Lithium (Li)		0.019	0.007- 0.020		
Phosphorus (P)		186	150- 220		
Selenium (Se)		0.78	0.70- 1.2		
Strontium (Sr)		5.0	0.30- 3.5		
Sulfur (S)		47700	44000- 50000		
Cobalt (Co)		0.17	0.004- 0.020		
Iron (Fe)		8.1	7.0- 16		
Germanium (Ge)		0.035	0.030- 0.040		
Rubidium (Rb)		0.014	0.011- 0.12		
Zirconium (Zr)		0.010	0.020- 0.44		

SPECIMEN DATA		RATIOS	
COMMENTS:		ELEMENTS	RATIOS
Date Collected: 3/27/2012	Sample Size: 0.201 g	Ca/Mg	21
Date Received: 4/14/2012	Sample Type: Head	Ca/P	2.82
Date Completed: 4/20/2012	Hair Color: Blond	Na/K	2.18
Methodology: ICP/MS	Treatment:	Zn/Cu	15
	Shampoo: L'oreal	Zn/Cd	> 999
		RANGE	
			4- 30
			0.8- 8
			0.5- 10
			4- 20
			> 800