

## Toxic &amp; Essential Elements; Hair

TOXIC METALS				
		RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)		2.1	< 8.0	
Antimony (Sb)		< 0.01	< 0.066	
Arsenic (As)		0.041	< 0.060	
Barium (Ba)		0.29	< 1.5	
Beryllium (Be)		< 0.01	< 0.020	
Bismuth (Bi)		0.036	< 2.0	
Cadmium (Cd)		< 0.009	< 0.060	
Lead (Pb)		0.04	< 0.60	
Mercury (Hg)		0.04	< 0.40	
Platinum (Pt)		< 0.003	< 0.005	
Thallium (Tl)		< 0.001	< 0.002	
Thorium (Th)		< 0.001	< 0.002	
Uranium (U)		0.005	< 0.060	
Nickel (Ni)		0.07	< 0.30	
Silver (Ag)		0.12	< 0.18	
Tin (Sn)		0.05	< 0.30	
Titanium (Ti)		0.27	< 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)		284	350- 1000	
Magnesium (Mg)		28	35- 120	
Sodium (Na)		99	18- 180	
Potassium (K)		23	8- 75	
Copper (Cu)		13	11- 37	
Zinc (Zn)		160	150- 230	
Manganese (Mn)		0.09	0.08- 0.60	
Chromium (Cr)		0.41	0.40- 0.65	
Vanadium (V)		0.025	0.020- 0.075	
Molybdenum (Mo)		0.026	0.025- 0.060	
Boron (B)		0.25	0.20- 1.2	
Iodine (I)		9.0	0.25- 1.3	
Lithium (Li)		< 0.004	0.007- 0.020	
Phosphorus (P)		169	150- 220	
Selenium (Se)		0.79	0.70- 1.1	
Strontium (Sr)		0.51	0.86- 6.2	
Sulfur (S)		45700	44000- 50000	
Cobalt (Co)		0.003	0.005- 0.040	
Iron (Fe)		4.7	7.0- 16	
Germanium (Ge)		0.030	0.031- 0.040	
Rubidium (Rb)		0.025	0.006- 0.060	
Zirconium (Zr)		0.14	0.025- 0.50	

SPECIMEN DATA		RATIOS	
<b>COMMENTS:</b>		<b>ELEMENTS</b>	<b>RATIOS</b>
Date Collected: 11/18/2012	Sample Size: 0.198 g	Ca/Mg	10.1
Date Received: 11/23/2012	Sample Type: Head	Ca/P	1.68
Date Completed: 11/28/2012	Hair Color: Blond	Na/K	4.3
Methodology: ICP/MS	Treatment:	Zn/Cu	12.3
	Shampoo: Vo5	Zn/Cd	> 999
		<b>RANGE</b>	
			4- 30
			1- 12
			0.5- 10
			4- 20
			> 800

### **Health history for hair test 708**

- 1 Current symptoms are spacing out, depression, fatigue, headaches.
2. dental history, no root canal or amalgams
- 3 no clean up needed
- 4 Mom had 7 amalgams
- 5 Vaccinations chick pox, mmr, all preschool vaccines, meningitis and all recommended by pediatrician
- 6 possible flu shot once, no travel shot
- 7 supplements none taken
- 8 live near the ocean and swims frequently in pools and breast fed 3 years by mom who was ill and didn't know why. live @30 miles from wtc 9/11
- 9 Rumson, NJ USA