



SEX: Female  
AGE: 52



**Toxic & Essential Elements; Hair**

TOXIC METALS				
		RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)		2.4	< 7.0	
Antimony (Sb)		0.014	< 0.050	
Arsenic (As)		0.039	< 0.060	
Barium (Ba)		1.8	< 2.0	
Beryllium (Be)		< 0.01	< 0.020	
Bismuth (Bi)		0.022	< 2.0	
Cadmium (Cd)		0.13	< 0.050	
Lead (Pb)		2.9	< 0.60	
Mercury (Hg)		0.05	< 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)		0.27	< 0.30	
Silver (Ag)		1.1	< 0.15	
Tin (Sn)		0.23	< 0.30	
Titanium (Ti)		0.33	< 0.70	
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)		494	300- 1200		
Magnesium (Mg)		330	35- 120		
Sodium (Na)		640	20- 250		
Potassium (K)		180	8- 75		
Copper (Cu)		390	11- 37		
Zinc (Zn)		210	140- 220		
Manganese (Mn)		1.0	0.08- 0.60		
Chromium (Cr)		0.41	0.40- 0.65		
Vanadium (V)		0.027	0.018- 0.065		
Molybdenum (Mo)		0.023	0.020- 0.050		
Boron (B)		0.77	0.25- 1.5		
Iodine (I)		1.2	0.25- 1.8		
Lithium (Li)		0.007	0.007- 0.020		
Phosphorus (P)		181	150- 220		
Selenium (Se)		0.71	0.55- 1.1		
Strontium (Sr)		2.8	0.50- 7.6		
Sulfur (S)		52600	44000- 50000		
Cobalt (Co)		0.024	0.005- 0.040		
Iron (Fe)		8.5	7.0- 16		
Germanium (Ge)		0.034	0.030- 0.040		
Rubidium (Rb)		0.22	0.007- 0.096		
Zirconium (Zr)		0.013	0.020- 0.42		

SPECIMEN DATA		RATIOS	
<b>COMMENTS:</b>		<b>ELEMENTS</b>	<b>RATIOS</b>
Date Collected: 3/18/2012	Sample Size: 0.198 g	Ca/Mg	1.5
Date Received: 3/23/2012	Sample Type: Head	Ca/P	2.73
Date Completed: 3/24/2012	Hair Color: Brown	Na/K	3.56
Methodology: ICP/MS	Treatment:	Zn/Cu	0.538
	Shampoo: Dr Bronner	Zn/Cd	> 999
		<b>RANGE</b>	
			4- 30
			1- 12
			0.5- 10
			4- 20
			> 800



SEX: Female  
AGE:

*Toxic & Essential Elements; Hair*

TOXIC METALS				
		RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)		1.0	< 7.0	
Antimony (Sb)		0.010	< 0.050	
Arsenic (As)		0.053	< 0.060	
Barium (Ba)		0.87	< 2.0	
Beryllium (Be)		< 0.01	< 0.020	
Bismuth (Bi)		0.013	< 2.0	
Cadmium (Cd)		0.053	< 0.050	
Lead (Pb)		1.4	< 0.60	
Mercury (Hg)		0.15	< 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)		0.32	< 0.30	
Silver (Ag)		0.29	< 0.15	
Tin (Sn)		0.08	< 0.30	
Titanium (Ti)		0.32	< 0.70	
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)		361	300- 1200	
Magnesium (Mg)		67	35- 120	
Sodium (Na)		670	20- 250	
Potassium (K)		240	8- 75	
Copper (Cu)		120	11- 37	
Zinc (Zn)		170	140- 220	
Manganese (Mn)		0.59	0.08- 0.60	
Chromium (Cr)		0.50	0.40- 0.65	
Vanadium (V)		0.043	0.018- 0.065	
Molybdenum (Mo)		0.032	0.020- 0.050	
Boron (B)		1.0	0.25- 1.5	
Iodine (I)		0.33	0.25- 1.8	
Lithium (Li)		0.008	0.007- 0.020	
Phosphorus (P)		162	150- 220	
Selenium (Se)		0.83	0.55- 1.1	
Strontium (Sr)		1.0	0.50- 7.6	
Sulfur (S)		46900	44000- 50000	
Cobalt (Co)		0.009	0.005- 0.040	
Iron (Fe)		6.5	7.0- 16	
Germanium (Ge)		0.029	0.030- 0.040	
Rubidium (Rb)		0.36	0.007- 0.096	
Zirconium (Zr)		0.016	0.020- 0.42	

COMMENTS:	SPECIMEN DATA		RATIOS	
	ELEMENTS	RATIOS	RANGE	
Date Collected: 7/29/2012	Ca/Mg	5.39	4- 30	
Date Received: 8/1/2012	Ca/P	2.23	1- 12	
Date Completed: 8/4/2012	Na/K	2.79	0.5- 10	
Methodology: ICP/MS	Zn/Cu	1.42	4- 20	
	Zn/Cd	> 999	> 800	

1) What are your current symptoms and health history?

Nearly every symptom listed on pages 25-29 of AI. The symptoms come and go but many of them are present every day. I have been ill a very long time -- diagnosed with Lyme in 2004 through positive blood tests which were ++++ positive in almost every aspect possible to be positive.

Periods of crushing fatigue with accompanying listlessness

No motivation -- loss of interest in things

Irritability

Anxiety/Stress

Extreme Fatigue "Crash" after dealing with stressful things

Brain Fog

Trouble Finding Words

Critical Periods of loss of short-term memory

Weakness of muscles

Periods of severe insomnia

Periods of crushing afternoon sleepiness which don't coincide necessarily with periods of insomnia

Flushing of face

Various digestive issues

Inability to regulate body temperature

Inability to regulate circadian rhythm -- no matter how hard I try

Severe Migraines

Tinnitus

Feelings of Weakness in Upper Arms

Fluctuating Poor Distance Vision

Easily Bruising

Extreme Multiple Chemical Sensitivity

Hyperacusis

Photophobic

Inability to Sweat

Periods of Tachycardia for no reason -- Tests all show normal

Hypothyroid

Excessive Urination

Low Adrenal Function

Low Blood Pressure

Below Normal Temperature

Hypoglycemic type spells with no evidence of diabetes via testing

Sinus Pain & Pressure

Eye Pain -- Sometime throbbing; sometimes feels like stabbing in eye  
Very Poor Night Vision with Halos around bright lights  
Spells of Trouble Focusing Eyes  
Spells of Dizziness  
Popping Joints  
Weak Knees  
Tingling in Left Side of Tongue and down left arm and leg  
Tremors in Fingers of right hand  
Poker like burning from shoulder to hand along the outside of right arm  
down into right fingers  
Loss of coordination (trouble dialing phone numbers)  
Muscle cramps  
Extreme fatigue for days after VERY moderate exercise  
Kidney Stones

There are more, but I think you get the idea.

2) Dental history (wisdom teeth removed? First root canal placed? Braces?  
First amalgam

Wisdom teeth removed in 20s. First root canal(s) (two teeth) placed at least  
25 years ago (not certain when). No braces. First amalgam in teens. Some  
of amalgams I have currently are at least 20 years old if not older.

3) What dental work do you currently have in place? What part of the dental  
cleanup have you completed?

4 Large Amalgams in Place. 5 Crowns, 3 with Root canals. At least one of  
the root canals has amalgam under it because dentist who placed it said so  
when placing the crown. The oldest two of the root canal crowns are nickel  
crowns. Recent extraction of tooth #9 (front incisor) due to abscess with  
flipper tooth as replacement (for now). Hopefully, about to begin amalgam  
removal.

6) Supplements and medications (including dosages) taken at time of hair test, or for the 3-6 months before the sample was taken.

Supplemented religiously with magnesium for the last 8 years although not in overly large amounts. Also Epsom's baths. All other supplements -- Vit C, Vit E, EFAs, Vit D, etc. have been sporadic up until a few weeks ago -- so sporadic that probably not a factor concerning the results of this test.

7) Other information you feel may be relevant?

I have been concerned about the copper pipes in my house due to the fact that I am soaking in the baths. My hair test is off the chart with copper. Origin of lead & cadmium, I don't know.