



SEX: Female  
AGE: 47

**Toxic & Essential Elements; Hair**

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)	1.1	< 12	
Antimony (Sb)	< 0.01	< 0.060	
Arsenic (As)	0.035	< 0.090	
Barium (Ba)	0.78	< 2.0	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	0.053	< 2.0	
Cadmium (Cd)	0.021	< 0.050	
Lead (Pb)	0.13	< 1.0	
Mercury (Hg)	0.03	< 0.80	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	< 0.001	< 0.002	
Uranium (U)	0.15	< 0.060	
Nickel (Ni)	0.06	< 0.40	
Silver (Ag)	0.05	< 0.10	
Tin (Sn)	0.03	< 0.30	
Titanium (Ti)	0.32	< 1.3	
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)	553	475- 1500			
Magnesium (Mg)	98	45- 180			
Sodium (Na)	270	80- 450			
Potassium (K)	160	28- 160			
Copper (Cu)	16	11- 30			
Zinc (Zn)	230	130- 200			
Manganese (Mn)	0.28	0.15- 0.65			
Chromium (Cr)	0.35	0.40- 0.65			
Vanadium (V)	0.028	0.018- 0.065			
Molybdenum (Mo)	0.13	0.040- 0.10			
Boron (B)	1.2	0.40- 4.0			
Iodine (I)	0.30	0.25- 1.8			
Lithium (Li)	0.16	0.008- 0.030			
Phosphorus (P)	230	250- 500			
Selenium (Se)	0.70	0.80- 1.3			
Strontium (Sr)	3.5	1.0- 8.0			
Sulfur (S)	43800	42000- 48000			
Cobalt (Co)	0.010	0.006- 0.035			
Iron (Fe)	6.9	7.0- 16			
Germanium (Ge)	0.029	0.030- 0.040			
Rubidium (Rb)	0.13	0.030- 0.25			
Zirconium (Zr)	0.38	0.040- 1.0			

SPECIMEN DATA		RATIOS	
<b>COMMENTS:</b>		ELEMENTS	RATIOS
Date Collected: 05/29/2014	Sample Size: 0.197 g	Ca/Mg	5.64
Date Received: 06/02/2014	Sample Type: Pubic	Ca/P	2.4
Date Completed: 06/05/2014	Hair Color: Brown	Na/K	1.69
Methodology: ICP/MS	Treatment:	Zn/Cu	14.4
	Shampoo: Dr Bronners	Zn/Cd	> 999
		RANGE	
		4- 30	
		1- 12	
		0.5- 10	
		4- 20	
		> 800	

## **Health history for hair test 770 update August 2014**

Details:

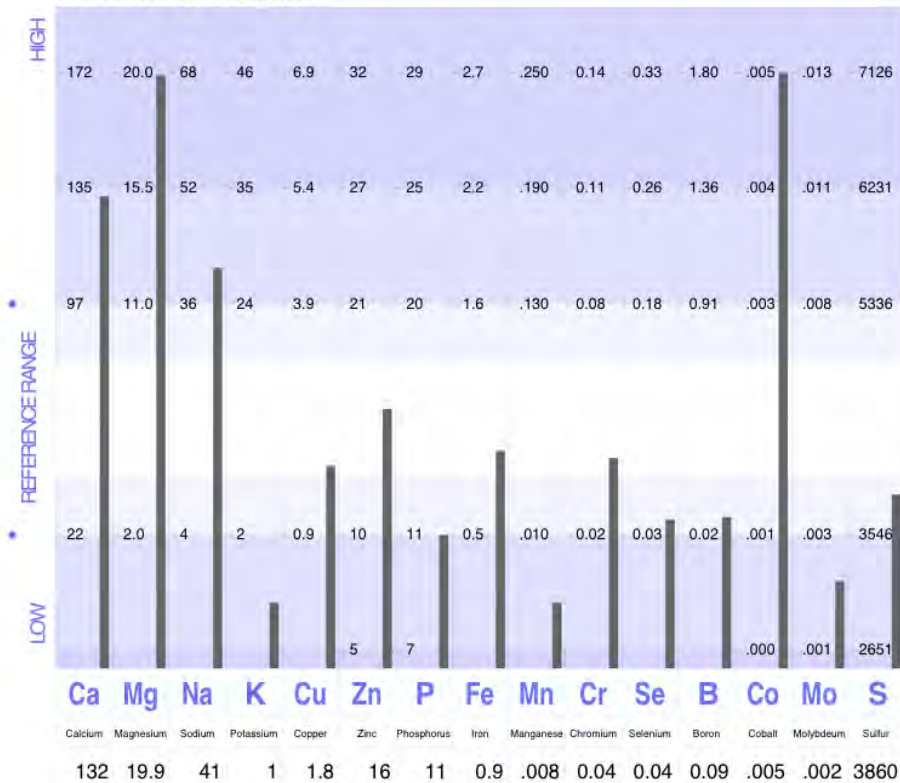
I've been chelating since June 1, 2013. I had 2 high copper amalgams removed in May 2013. I'm currently on ALA 12.5 (was at 18 mg a few weeks ago and reduced due to illness) and DMPS 12.5. Prior hair test is #770 (which was done approx 2 years before amalgam removal). Original symptoms listed there.

My dump came rather late, about 10 months after amalgam removal (unless I didn't notice it earlier). I believe I'm still dumping 15 months post removal.

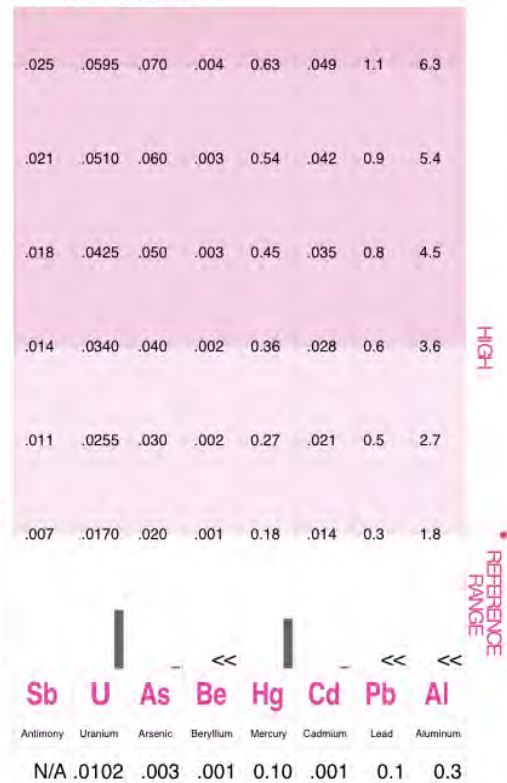
Current symptoms: hot flashes (which my OMD says is an immune response, like sweating, not menopause), fatigue, vasovagal symptoms after eating, bloating in upper abdomen, joint problems on left side of body (frozen shoulder, sciatica, knee problems). Autoimmune type inflammation in body (stiffness that moves and comes/goes). Difficulty completing tasks, disorganized. Mood inconsistent.

Overall, I do much better when following strict diet (no sugar, starches, caffeine). My thiol sensitivity seems to be completely gone! It was severe the first 6 months. Still somewhat sensitive to other substances, but there is some improvement there too.

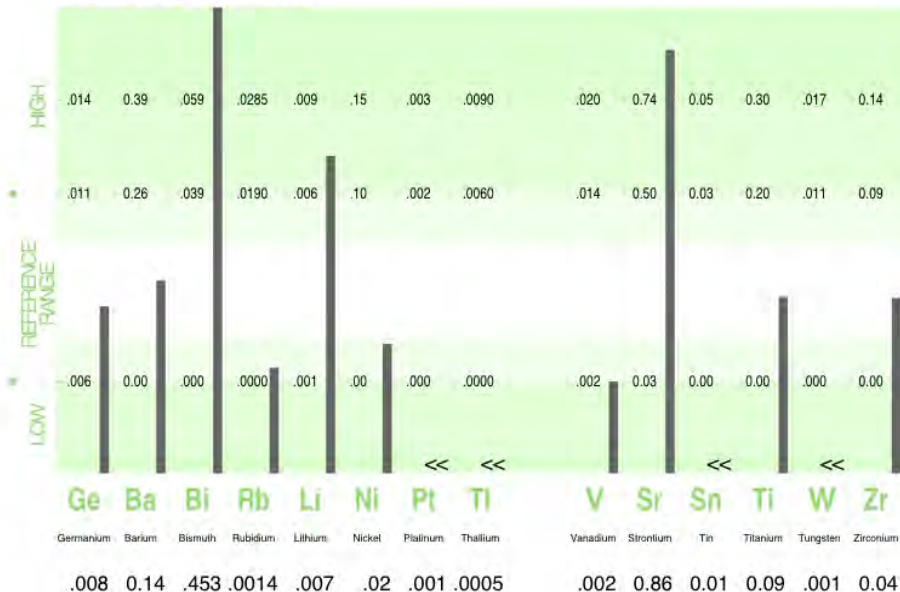
## NUTRITIONAL ELEMENTS



## TOXIC ELEMENTS



## ADDITIONAL ELEMENTS



"<<": Below Calibration Limit; Value Given Is Calibration Limit

"QNS": Sample Size Was Inadequate For Analysis.

"N/A": Currently Not Available

Ideal Levels And Interpretation Have Been Based On Hair Samples Obtained From The Mid-Parietal To The Occipital Region Of The Scalp.

Laboratory Analysis Provided by Trace Elements, Inc., an H. H. S. Licensed Clinical Laboratory. FNo. 45 D0481787

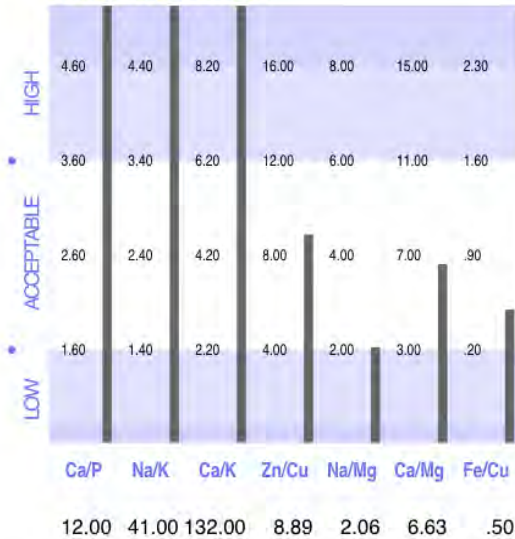
10/10/2011  
CURRENT TEST RESULTS

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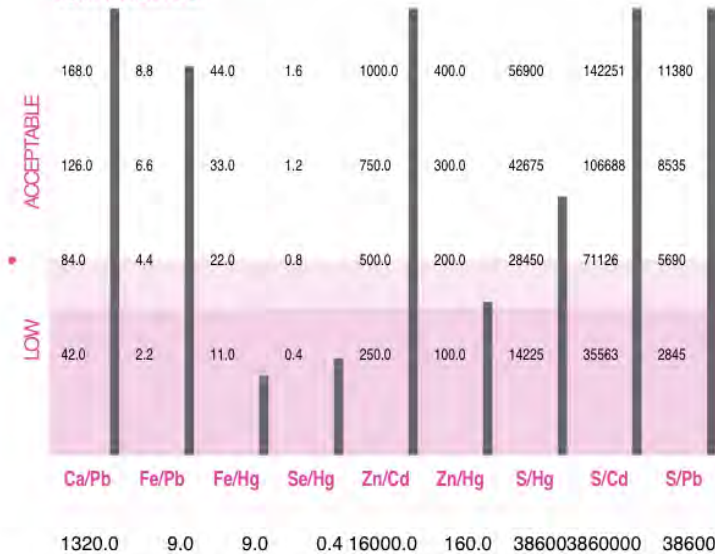
PREVIOUS TEST RESULTS



## SIGNIFICANT RATIOS



## TOXIC RATIOS



## ADDITIONAL RATIOS

	Current	Previous
Ca/Sr	153.49	131/1
Cr/V	20.00	13/1
Cu/Mo	900.00	625/1
Fe/Co	180.00	440/1
K/Co	200.00	2000/1
K/Li	142.86	2500/1
Mg/B	221.11	40/1
S/Cu	2144.44	1138/1
Se/Tl	80.00	37/1
Se/Sn	4.00	0.67/1
Zn/Sn	1600.00	167/1

## LEVELS

All mineral levels are reported in milligrams percent (milligrams per one-hundred grams of hair). One milligram percent (mg%) is equal to ten parts per million (ppm).

### NUTRITIONAL ELEMENTS

Extensively studied, the nutrient elements have been well defined and are considered essential for many biological functions in the human body. They play key roles in such metabolic processes as muscular activity, endocrine function, reproduction, skeletal integrity and overall development.

### TOXIC ELEMENTS

The toxic elements or "heavy metals" are well-known for their interference upon normal biochemical function. They are commonly found in the environment and therefore are present to some degree, in all biological systems. However, these metals clearly pose a concern for toxicity when accumulation occurs to excess.

### ADDITIONAL ELEMENTS

These elements are considered as possibly essential by the human body. Additional studies are being conducted to better define their requirements and amounts needed.

## RATIOS

A calculated comparison of two elements to each other is called a ratio. To calculate a ratio value, the first mineral level is divided by the second mineral level.

EXAMPLE: A sodium (Na) test level of 24 mg% divided by a potassium (K) level of 10 mg% equals a Na/K ratio of 2.4 to 1.

### SIGNIFICANT RATIOS

If the synergistic relationship (or ratio) between certain minerals in the body is disturbed, studies show that normal biological functions and metabolic activity can be adversely affected. Even at extremely low concentrations, the synergistic and/or antagonistic relationships between minerals still exist, which can indirectly affect metabolism.

### TOXIC RATIOS

It is important to note that individuals with elevated toxic levels may not always exhibit clinical symptoms associated with those particular toxic minerals. However, research has shown that toxic minerals can also produce an antagonistic effect on various essential minerals eventually leading to disturbances in their metabolic utilization.

### ADDITIONAL RATIOS

These ratios are being reported solely for the purpose of gathering research data. This information will then be used to help the attending health-care professional in evaluating their impact upon health.

## REFERENCE RANGES

Generally, reference ranges should be considered as guidelines for comparison with the reported test values. These reference ranges have been statistically established from studying an international population of "healthy" individuals.

Important Note: The reference ranges should not be considered as absolute limits for determining deficiency, toxicity or acceptance.

## Health history for hair test 770

1. Current Symptoms: neurological (pain and inflammation on left side of body but "clean" MRI), palpitations, inflammation in chest cavity, MCS, brain fog, gut dysbiosis for nearly 3 years now (diagnosed with SIBO after breath test), pain in muscles, short of breath, acne, hair loss, histamine intolerance (only 2 weeks per month, related to my cycle), thiol sensitivity, low bile flow, immune issues, sensitive to light, sounds, scents and touch (like those itchy tags in clothing which I cut out).

Health History: CFS at age 22. Fibromyalgia at age 28. Multiple intestinal infections as an adult. MCS most of adult life. Allergic or sensitive to many drugs. Anxiety and Panic Disorder on/off. Became quite ill about 2.5 years ago without any solution (see "current symptoms"). Mitral Valve Prolapse. Two bad concussions: one at 25 and the other at 39. On paper, my health has always looked good.

2. Dental History: 2 amalgam fillings installed at approximately 14-15 years of age (I still have them, they are 30+ years old now), 4 wisdom teeth removed at age 18 (2 were impacted in the bone). Severe teeth grinding, wear a mouth guard, the mouth guard has amalgam tattoos from grinding.

3. Current Dental: no change from #2 above. 2 Amalgams are being removed first two weeks of May 2013.

4. Mother Dental History: Mother had amalgam fillings in her mouth when she was pregnant with me. She didn't nurse us.

5. Immunizations: I had all the usual childhood immunizations required in the US in the late 1960's. (I have the smallpox vaccination scar on my arm.) My pediatrician developed one or more of the vaccines. Have had travel shots about 8 years ago. 1-2 of them seemed to have thimerisol. No flu shots - ever. However, did take allergy shots for about 6 years, but I was told they had no preservatives.

6. Supplements at time of hair test: oregano oil, digestive enzymes, acetyl glutathione, milk thistle, macro greens (a powder). I was also using sensodyne toothpaste.

7. age/height, weight (at that time): 44, 5'2", 125

8. I was living in a moldy house at the time of the hair test and didn't know it. When I was a child (8-9) my parents had us kids helping them manufacture their deck coating materials for their business (resins, pigments, fiberglass and powdery substances). We wore only cheap paper masks while handling the materials - pouring, mixing, rolling etc.

9. Los Angeles, CA, USA