

HASB CLASS	ESSENTIAL ELEMENTS	HAIR VALUE (PPM)	REFERENCE RANGE (PPM)	SUSPICIOUS (BELOW REFERENCE RANGE)	REFERENCE RANGE	SUSPICIOUS (ABOVE REFERENCE RANGE)
CLINICALLY SIGNIFICANT HAIR ELEMENTS	Calcium	3871	200 - 600	*****	*****	***** >>
	Magnesium	222.4	25 - 75	*****	*****	***** >>
	Zinc ++	69	160 - 240	*****		
	Copper	25.9	12 - 35	*****	*****	
	Chromium	.40	.5 - 1.5	*****		
	TOXIC ELEMENTS	HAIR VALUE (PPM)	REFERENCE RANGE (PPM)	LOW	MEDIUM	HIGH
	Lead	2.86	< 20.0	**		
	Mercury ++	3.85	< 2.5	*****	*****	
	Cadmium	.63	< 1.0	*****		
	Arsenic <<	1.00	< 2.0	*		
Nickel ++	3.78	< 1.0	*****	*****	***** >>	

SUGGESTED CLINICAL SIGNIFICANCE IN HAIR	ELEMENT	HAIR VALUE (PPM)	REFERENCE RANGE (PPM)	BELOW REFERENCE RANGE	REFERENCE RANGE	ABOVE REFERENCE RANGE
	Sodium	37	150 - 350	****		
	Potassium	10.0	75 - 180	**		
	Selenium <<	1.0	3 - 6	*		
	Manganese	.94	1.0 - 10.0	*****		
	Aluminum	49.43	< 20.0	*****	*****	*****

UNKNOWN CLINICAL SIGNIFICANCE IN HAIR	ELEMENT	HAIR VALUE (PPM)	REFERENCE RANGE (PPM)	BELOW REFERENCE RANGE	REFERENCE RANGE	ABOVE REFERENCE RANGE
	Cobalt ++	1.20	.2 - 1.0	*****	*****	****
	Iron	9.2	20 - 50	*****		
	Lithium <<	.05	.1 - .8	*		
	Molybdenum <<	.10	.1 - 1.0	*		
	Phosphorus ++	58	100 - 170	*****		
	Vanadium <<	.04	.5 - 1.0	*		

<< Indicates Below Detection Limit; Value Given Is Detection Limit.  
 < = LESS THAN PPM = PARTS PER MILLION  
 >> = GREATER THAN ++ CONFIRMED VALUE

## **Health history for hair test 617**

### **1991 Hair Test**

#### **What are your current symptoms and health history?**

Recently diagnosed with autoimmune thyroiditis (Hashimoto's disease) with very high antibodies. Many years psych symptoms (depression, anxiety) with related diagnoses. Trials of antidepressants, lithium caused thyroid to go hypothyroid, then on Synthroid for a time. Overeating and alcohol abuse.

#### **Dental history (wisdom teeth removed? First root canal placed? Braces? First amalgam etc...)**

First amalgam as child in baby molar. Braces as teen, wisdom teeth removed

#### **What dental work do you currently have in place? What part of the dental cleanup have you completed?**

One gold onlay. Amalgam in all 4 quadrants (don't know how many). No dental cleanup

#### **What dentistry did your mother have at any time before or during pregnancy?**

Amalgam fillings, rest unknown

#### **What vaccinations have you had and when (including flu and especially travel shots)?**

Childhood immunizations of the 1950s. Occasional flu shots.

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

On Synthroid and Cytomel, then recently switched to Armour thyroid (1.5 grains). Can't remember supplements

#### **What is your location - city & country (so that we can learn where certain toxins are more prevalent).**

Central Valley – California (Sacramento to SF area)



PATIENT: Number 617  
 SEX: Female  
 AGE: 59

**Toxic & Essential Elements; Hair**

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)	2.2	< 12	
Antimony (Sb)	0.010	< 0.060	
Arsenic (As)	0.16	< 0.090	
Barium (Ba)	6.7	< 2.0	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	1.6	< 2.0	
Cadmium (Cd)	0.012	< 0.050	
Lead (Pb)	0.15	< 1.0	
Mercury (Hg)	0.12	< 0.80	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	< 0.001	< 0.002	
Uranium (U)	0.064	< 0.060	
Nickel (Ni)	0.04	< 0.40	
Silver (Ag)	0.01	< 0.10	
Tin (Sn)	< 0.02	< 0.30	
Titanium (Ti)	0.58	< 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)	1260	475- 1500			
Magnesium (Mg)	220	45- 180			
Sodium (Na)	670	80- 450			
Potassium (K)	230	28- 160			
Copper (Cu)	17	11- 30			
Zinc (Zn)	180	130- 200			
Manganese (Mn)	0.17	0.15- 0.65			
Chromium (Cr)	0.40	0.40- 0.65			
Vanadium (V)	0.16	0.018- 0.065			
Molybdenum (Mo)	0.041	0.040- 0.10			
Boron (B)	1.2	0.40- 4.0			
Iodine (I)	5.0	0.25- 1.8			
Lithium (Li)	0.009	0.008- 0.030			
Phosphorus (P)	402	250- 500			
Selenium (Se)	1.3	0.80- 1.3			
Strontium (Sr)	12	1.0- 8.0			
Sulfur (S)	44000	42000- 48000			
Cobalt (Co)	0.006	0.006- 0.035			
Iron (Fe)	7.7	7.0- 16			
Germanium (Ge)	0.031	0.030- 0.040			
Rubidium (Rb)	0.37	0.030- 0.25			
Zirconium (Zr)	0.53	0.040- 1.0			

SPECIMEN DATA		RATIOS		
<b>COMMENTS:</b>		ELEMENTS	RATIOS	RANGE
Date Collected: 5/6/2012	Sample Size: 0.204 g	Ca/Mg	5.73	4- 30
Date Received: 5/10/2012	Sample Type: Pubic	Ca/P	3.13	1- 12
Date Completed: 5/14/2012	Hair Color: Brown	Na/K	2.91	0.5- 10
Methodology: ICP/MS	Treatment:	Zn/Cu	10.6	4- 20
	Shampoo: Jergens Soap	Zn/Cd	> 999	> 800

## **Health history for hair test 617**

### **2012 Hair Test**

#### **What are your current symptoms and health history?**

Hashimoto's (not on Thyroid Rx). Recently started LDN, Lugol's iodine in prep to go on desiccated thyroid, if necessary.

#### **Dental history (wisdom teeth removed? First root canal placed? Braces? First amalgam etc...)**

First amalgam as child in baby molar. Braces as teen, wisdom teeth removed

#### **What dental work do you currently have in place? What part of the dental cleanup have you completed?**

Two gold onlays. Amalgam in all 4 quadrants (don't know how many). No dental cleanup

#### **What dentistry did your mother have at any time before or during pregnancy?**

Amalgam fillings, rest unknown

#### **What vaccinations have you had and when (including flu and especially travel shots)?**

Childhood immunizations of the 1950s. Occasional flu shots (none for last 21 years)

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

Supplements:

Vit C – 1 G

B12 – 5mg every other day

D3 – 10,000 IU

Multivitamin/mineral

B2 – 200 mg

B3 – 1 G

Chromium picolinate – 800 mcgs

Selenium 200 mcg

Lugol's iodine – 250 mcgs to 5 mg over last 3 months

Liquid fish oil – 2 teaspoons/day

Probiotic capsules

Betaine HCL

Digestive enzymes

Low Dose Naldrexone – 1.66 mg to 2.49 mg started 1 month ago

#### **Other information you feel may be relevant?**

No grains, dairy, soy, eggs since fecal testing 2 years ago. Paleo diet.

#### **What is your location - city & country (so that we can learn where certain toxins are more prevalent).**

Central Valley – California (Sacramento to SF area)