

# HAIR ELEMENTS



**PATIENT: Number 418**  
**SEX: Male**  
**AGE: 45**  
**LOCATION: Wilmington, OH, USA**

## POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 <sup>th</sup>	95 <sup>th</sup>
Aluminum	17	< 7.0		
Antimony	0.30	< 0.066		
Arsenic	0.076	< 0.080		
Barium	0.76	< 1.0		
Beryllium	< 0.01	< 0.020		
Bismuth	0.024	< 2.0		
Cadmium	0.31	< 0.065		
Lead	3.6	< 0.80		
Mercury	0.09	< 0.80		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.002		
Thorium	0.001	< 0.002		
Uranium	0.045	< 0.060		
Nickel	0.28	< 0.20		
Silver	1.3	< 0.08		
Tin	0.30	< 0.30		
Titanium	0.55	< 0.60		
Total Toxic Representation				

## ESSENTIAL AND OTHER ELEMENTS

ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE				
			2.5 <sup>th</sup>	16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup>	97.5 <sup>th</sup>
Calcium	361	200- 750					
Magnesium	120	25- 75					
Sodium	62	20- 180					
Potassium	61	9- 80					
Copper	16	11- 30					
Zinc	140	130- 200					
Manganese	1.0	0.08- 0.50					
Chromium	0.60	0.40- 0.70					
Vanadium	0.087	0.018- 0.065					
Molybdenum	0.11	0.025- 0.060					
Boron	1.5	0.40- 3.0					
Iodine	2.4	0.25- 1.8					
Lithium	0.008	0.007- 0.020					
Phosphorus	210	150- 220					
Selenium	1.1	0.70- 1.2					
Strontium	5.8	0.30- 3.5					
Sulfur	47700	44000- 50000					
Cobalt	0.012	0.004- 0.020					
Iron	24	7.0- 16					
Germanium	0.042	0.030- 0.040					
Rubidium	0.066	0.011- 0.12					
Zirconium	0.17	0.020- 0.44					

### SPECIMEN DATA

**COMMENTS:**

Date Collected: 10/9/2010      Sample Size: 0.197 g  
 Date Received: 10/14/2010      Sample Type: Head  
 Date Completed: 10/15/2010      Hair Color: Brown  
 Client Reference: 1247618      Treatment:  
 Methodology: ICP-MS      Shampoo: Lye Soap

V010.08

### RATIOS

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	3.01	4- 30
Ca/P	1.72	0.8- 8
Na/K	1.02	0.5- 10
Zn/Cu	8.75	4- 20
Zn/Cd	452	> 800

# HAIR ELEMENTS



**PATIENT: Number 418 - first follow-up test**

**SEX: Male**

**AGE: 46**

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 <sup>th</sup>	95 <sup>th</sup>
Aluminum	39	< 7.0		
Antimony	0.15	< 0.066		
Arsenic	0.18	< 0.080		
Barium	1.0	< 1.0		
Beryllium	< 0.01	< 0.020		
Bismuth	0.10	< 2.0		
Cadmium	0.15	< 0.065		
Lead	4.0	< 0.80		
Mercury	0.13	< 0.80		
Platinum	< 0.003	< 0.005		
Thallium	0.001	< 0.002		
Thorium	0.007	< 0.002		
Uranium	0.036	< 0.060		
Nickel	0.71	< 0.20		
Silver	0.22	< 0.08		
Tin	0.73	< 0.30		
Titanium	2.3	< 0.60		
Total Toxic Representation				

ESSENTIAL AND OTHER ELEMENTS							
ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE				
			2.5 <sup>th</sup>	16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup>	97.5 <sup>th</sup>
Calcium	206	200- 750					
Magnesium	28	25- 75					
Sodium	84	20- 180					
Potassium	58	9- 80					
Copper	11	11- 30					
Zinc	170	130- 200					
Manganese	0.91	0.08- 0.50					
Chromium	0.72	0.40- 0.70					
Vanadium	0.13	0.018- 0.065					
Molybdenum	0.097	0.025- 0.060					
Boron	58	0.40- 3.0					
Iodine	1.4	0.25- 1.8					
Lithium	0.040	0.007- 0.020					
Phosphorus	231	150- 220					
Selenium	1.2	0.70- 1.2					
Strontium	1.9	0.30- 3.5					
Sulfur	50700	44000- 50000					
Cobalt	0.032	0.004- 0.020					
Iron	59	7.0- 16					
Germanium	0.036	0.030- 0.040					
Rubidium	0.090	0.011- 0.12					
Zirconium	0.19	0.020- 0.44					

SPECIMEN DATA				RATIOS		
<b>COMMENTS: Results checked</b>				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 6/3/2011	Sample Size: 0.196 g					
Date Received: 6/6/2011	Sample Type: Head			Ca/Mg	7.36	4- 30
Date Completed: 6/10/2011	Hair Color: Brown			Ca/P	0.892	0.8- 8
Client Reference: 1280334	Treatment:			Na/K	1.45	0.5- 10
Methodology: ICP-MS	Shampoo: Lye Soap			Zn/Cu	15.5	4- 20
				Zn/Cd	> 999	> 800



PATIENT: Number 418 - second follow-up test  
 SEX: Male  
 AGE: 48

**Toxic & Essential Elements; Hair**

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)	4.2	< 7.0	
Antimony (Sb)	0.31	< 0.066	
Arsenic (As)	0.093	< 0.080	
Barium (Ba)	0.40	< 1.0	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	0.011	< 2.0	
Cadmium (Cd)	0.22	< 0.065	
Lead (Pb)	1.6	< 0.80	
Mercury (Hg)	0.38	< 0.80	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	< 0.001	< 0.002	
Uranium (U)	0.20	< 0.060	
Nickel (Ni)	0.18	< 0.20	
Silver (Ag)	0.09	< 0.08	
Tin (Sn)	0.17	< 0.30	
Titanium (Ti)	0.23	< 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)	165	200- 750			
Magnesium (Mg)	14	25- 75			
Sodium (Na)	26	20- 180			
Potassium (K)	17	9- 80			
Copper (Cu)	11	11- 30			
Zinc (Zn)	140	130- 200			
Manganese (Mn)	0.43	0.08- 0.50			
Chromium (Cr)	0.52	0.40- 0.70			
Vanadium (V)	0.050	0.018- 0.065			
Molybdenum (Mo)	0.072	0.025- 0.060			
Boron (B)	2.0	0.40- 3.0			
Iodine (I)	0.75	0.25- 1.8			
Lithium (Li)	< 0.004	0.007- 0.020			
Phosphorus (P)	168	150- 220			
Selenium (Se)	1.1	0.70- 1.2			
Strontium (Sr)	1.5	0.30- 3.5			
Sulfur (S)	48000	44000- 50000			
Cobalt (Co)	0.007	0.004- 0.020			
Iron (Fe)	9.3	7.0- 16			
Germanium (Ge)	0.024	0.030- 0.040			
Rubidium (Rb)	0.021	0.011- 0.12			
Zirconium (Zr)	0.039	0.020- 0.44			

SPECIMEN DATA		RATIOS		
<b>COMMENTS:</b>		ELEMENTS	RATIOS	RANGE
Date Collected: 04/24/2013	Sample Size: 0.199 g	Ca/Mg	11.8	4- 30
Date Received: 04/29/2013	Sample Type: Head	Ca/P	0.982	0.8- 8
Date Completed: 04/30/2013	Hair Color: Brown	Na/K	1.53	0.5- 10
Methodology: ICP/MS	Treatment:	Zn/Cu	12.7	4- 20
	Shampoo: Dove	Zn/Cd	636	> 800

## **Hair Test 418**

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

I have had no bad health until 10 years ago when strange arthritis symptoms appeared. Nobody could tell me what it was.

### **Dental history (Wisdom teeth removed and when? Any other extractions. First root canal placed? Braces? First amalgam etc...)**

I have had only one cavity in my life and recently have been trying to find it. Nobody can find it so we are assuming it has fallen out at some point.

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

None

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

Unknown

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

I don't know. I had all the normal ones that every kid has.

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

Magnesium, vitamin c

### **What is your age, height and weight?**

45 years 5'5 220lbs

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

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

Wilmington OH