

**POTENTIALLY TOXIC ELEMENTS**

TOXIC ELEMENTS	RESULT µg/g	REFERENCE RANGE	PERCENTILE	
			68 <sup>th</sup>	95 <sup>th</sup>
Aluminum	3.3	< 8.0	██████████	
Antimony	0.10	< 0.066	████████████████████	
Arsenic	0.12	< 0.080	████████████████████	
Beryllium	< 0.01	< 0.020		
Bismuth	0.91	< 2.0	██████████	
Cadmium	0.080	< 0.15	██████████	
Lead	0.49	< 1.0	██████████	
Mercury	0.08	< 0.40	██████████	
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.017	< 0.060	██████████	
Nickel	0.07	< 0.40	██████████	
Silver	0.20	< 0.20	████████████████████	
Tin	1.4	< 0.30	██	
Titanium	0.46	< 1.0	██████████	
Total Toxic Representation			████████████████████	

**ESSENTIAL AND OTHER ELEMENTS**

ELEMENTS	RESULT µg/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	92	125- 370		████████████████████			
Magnesium	5	12- 30	██████████				
Sodium	77	12- 90			████████████████████		
Potassium	34	12- 40			██████████		
Copper	9.5	8.0- 16			██████████		
Zinc	110	100- 190			██████████		
Manganese	0.10	0.20- 0.55	████████████████████				
Chromium	0.40	0.26- 0.50			██████████		
Vanadium	0.031	0.030- 0.10			██████████		
Molybdenum	0.11	0.050- 0.13			██████████		
Boron	0.93	0.60- 4.0			██████████		
Iodine	2.4	0.25- 1.3			████████████████████		
Lithium	< 0.004	0.007- 0.023	████████████████████				
Phosphorus	163	160- 250			██████████		
Selenium	0.87	0.95- 1.7			██████████		
Strontium	0.09	0.16- 1.0			██████████		
Sulfur	50800	45500- 53000			██████████		
Barium	0.13	0.16- 0.80			██████████		
Cobalt	0.005	0.013- 0.035	████████████████████				
Iron	10	8.0- 19			██████████		
Germanium	0.026	0.045- 0.065	████████████████████				
Rubidium	0.025	0.016- 0.18			██████████		
Zirconium	0.37	0.040- 1.0			██████████		

**SPECIMEN DATA**

**RATIOS**

COMMENTS: 0142429

Date Collected: 3/13/2008  
 Date Received: 3/19/2008  
 Date Completed: 3/22/2008

Sample Size: 0.196 g  
 Sample Type: Head  
 Hair Color:  
 Treatment:  
 Shampoo:

Methodology: ICP-MS

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	18.4	4- 30
Ca/P	0.564	0.8- 8
Na/K	2.26	0.5- 10
Zn/Cu	11.6	4- 20
Zn/Cd	> 999	> 800

V06.99



PATIENT: Number 154 - follow-up test  
 SEX: Male  
 AGE: 8

**Toxic & Essential Elements; Hair**

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)	3.4	< 8.0	
Antimony (Sb)	0.024	< 0.066	
Arsenic (As)	0.046	< 0.080	
Barium (Ba)	0.09	< 0.75	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	3.0	< 2.0	
Cadmium (Cd)	0.021	< 0.070	
Lead (Pb)	0.34	< 1.0	
Mercury (Hg)	0.06	< 0.40	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	0.001	< 0.002	
Uranium (U)	0.065	< 0.060	
Nickel (Ni)	0.06	< 0.20	
Silver (Ag)	0.07	< 0.14	
Tin (Sn)	0.16	< 0.30	
Titanium (Ti)	0.78	< 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)	190	160- 500					
Magnesium (Mg)	14	12- 50					
Sodium (Na)	57	20- 200					
Potassium (K)	39	12- 140					
Copper (Cu)	49	11- 32					
Zinc (Zn)	150	110- 190					
Manganese (Mn)	0.14	0.08- 0.50					
Chromium (Cr)	0.42	0.40- 0.70					
Vanadium (V)	0.031	0.025- 0.10					
Molybdenum (Mo)	0.057	0.040- 0.090					
Boron (B)	0.82	0.50- 3.5					
Iodine (I)	1.4	0.25- 1.3					
Lithium (Li)	< 0.004	0.007- 0.020					
Phosphorus (P)	156	150- 220					
Selenium (Se)	0.92	0.70- 1.1					
Strontium (Sr)	0.25	0.21- 2.1					
Sulfur (S)	48500	44000- 51000					
Cobalt (Co)	0.002	0.004- 0.020					
Iron (Fe)	8.0	7.0- 16					
Germanium (Ge)	0.028	0.030- 0.040					
Rubidium (Rb)	0.044	0.008- 0.080					
Zirconium (Zr)	0.20	0.060- 0.70					

SPECIMEN DATA		RATIOS		
<b>COMMENTS:</b>		ELEMENTS	RATIOS	RANGE
Date Collected: 02/24/2013	Sample Size: 0.199 g	Ca/Mg	13.6	4- 30
Date Received: 02/28/2013	Sample Type: Head	Ca/P	1.22	0.8- 8
Date Completed: 03/01/2013	Hair Color: RED	Na/K	1.46	0.5- 10
Methodology: ICP/MS	Treatment:	Zn/Cu	3.06	4- 20
	Shampoo: Baby	Zn/Cd	> 999	> 800

## **Health history for hair test 154 – follow-up**

- 1 My son is adhd, aspergers-like, although no official diagnosis
- 2 No dental work
- 3 Mother had amalgams in mouth and flu shot during pregnancy
- 4 All childhood vaccinations from 2004-2011
- 5 This sample was taken after round 10 of chelation. Frequent dose method of 8mg dmps and 8mg of ala
- 6 Supplements with Zn, Mg, Krill oil, probiotic
- 7 Age 8yo, 48 in, 46 lbs
- 8 Central Pennsylvania