

**Toxic & Essential Elements; Hair**








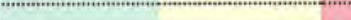










TOXIC METALS					
		RESULT µg/g	REFERENCE INTERVAL	PERCENTILE	
				68 <sup>th</sup>	95 <sup>th</sup>
Aluminum	(Al)	8.6	< 7.0		
Antimony	(Sb)	< 0.01	< 0.050		
Arsenic	(As)	0.022	< 0.060		
Barium	(Ba)	0.36	< 2.0		
Beryllium	(Be)	< 0.01	< 0.020		
Bismuth	(Bi)	0.12	< 2.0		
Cadmium	(Cd)	< 0.009	< 0.050		
Lead	(Pb)	0.24	< 0.60		
Mercury	(Hg)	0.33	< 0.80		
Platinum	(Pt)	< 0.003	< 0.005		
Thallium	(Tl)	0.001	< 0.002		
Thorium	(Th)	< 0.001	< 0.002		
Uranium	(U)	0.008	< 0.060		
Nickel	(Ni)	0.07	< 0.30		
Silver	(Ag)	0.02	< 0.15		
Tin	(Sn)	0.03	< 0.30		
Titanium	(Ti)	0.28	< 0.70		
Total Toxic Representation					



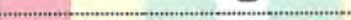





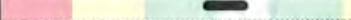



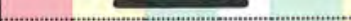









ESSENTIAL AND OTHER ELEMENTS								
		RESULT µg/g	REFERENCE INTERVAL	PERCENTILE				
				2.5 <sup>th</sup>	16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup>	97.5 <sup>th</sup>
Calcium	(Ca)	429	300 - 1200					
Magnesium	(Mg)	44	35 - 120					
Sodium	(Na)	37	20 - 250					
Potassium	(K)	29	8 - 75					
Copper	(Cu)	42	11 - 37					
Zinc	(Zn)	200	140 - 220					
Manganese	(Mn)	0.24	0.08 - 0.60					
Chromium	(Cr)	0.35	0.40 - 0.65					
Vanadium	(V)	0.034	0.018 - 0.065					
Molybdenum	(Mo)	0.028	0.020 - 0.050					
Boron	(B)	0.46	0.25 - 1.5					
Iodine	(I)	0.62	0.25 - 1.8					
Lithium	(Li)	< 0.004	0.007 - 0.020					
Phosphorus	(P)	170	150 - 220					
Selenium	(Se)	0.59	0.55 - 1.1					
Strontium	(Sr)	1.2	0.50 - 7.6					
Sulfur	(S)	49200	44000 - 50000					
Cobalt	(Co)	0.017	0.005 - 0.040					
Iron	(Fe)	6.6	7.0 - 16					
Germanium	(Ge)	0.026	0.030 - 0.040					
Rubidium	(Rb)	0.057	0.007 - 0.096					
Zirconium	(Zr)	0.032	0.020 - 0.42					

SPECIMEN DATA		RATIOS		
COMMENTS:		ELEMENTS	RATIOS	RANGE
Date Collected: 04/03/2013		Ca/Mg	9.75	4- 30
Date Received: 04/08/2013		Ca/P	2.52	1- 12
Date Completed: 04/10/2013		Na/K	1.28	0.5- 10
Methodology: ICP/MS		Zn/Cu	4.76	4- 20
Sample Size: 0.168 g		Zn/Cd	> 999	> 800
Sample Type: Head				
Hair Color: Blond				
Treatment:				
Shampoo: Shampoo Bar				



*Toxic & Essential Elements; Hair*

TOXIC METALS				PERCENTILE	
		RESULT µg/g	REFERENCE INTERVAL	68 <sup>th</sup>	95 <sup>th</sup>
Aluminum	(Al)	23	< 7.0		
Antimony	(Sb)	< 0.01	< 0.050		
Arsenic	(As)	0.013	< 0.060		
Barium	(Ba)	0.05	< 2.0		
Beryllium	(Be)	< 0.01	< 0.020		
Bismuth	(Bi)	0.021	< 2.0		
Cadmium	(Cd)	< 0.009	< 0.050		
Lead	(Pb)	0.24	< 0.60		
Mercury	(Hg)	0.10	< 0.80		
Platinum	(Pt)	< 0.003	< 0.005		
Thallium	(Tl)	< 0.001	< 0.002		
Thorium	(Th)	< 0.001	< 0.002		
Uranium	(U)	0.002	< 0.060		
Nickel	(Ni)	0.04	< 0.30		
Silver	(Ag)	0.01	< 0.15		
Tin	(Sn)	0.07	< 0.30		
Titanium	(Ti)	0.21	< 0.70		
Total Toxic Representation					

ESSENTIAL AND OTHER ELEMENTS				PERCENTILE				
		RESULT µg/g	REFERENCE INTERVAL	2.5 <sup>th</sup>	16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup>	97.5 <sup>th</sup>
Calcium	(Ca)	396	300– 1200					
Magnesium	(Mg)	31	35– 120					
Sodium	(Na)	82	20– 250					
Potassium	(K)	66	8– 75					
Copper	(Cu)	9.4	11– 37					
Zinc	(Zn)	210	140– 220					
Manganese	(Mn)	0.10	0.08– 0.60					
Chromium	(Cr)	0.37	0.40– 0.65					
Vanadium	(V)	0.026	0.018– 0.065					
Molybdenum	(Mo)	0.020	0.020– 0.050					
Boron	(B)	0.47	0.25– 1.5					
Iodine	(I)	3.9	0.25– 1.8					
Lithium	(Li)	< 0.004	0.007– 0.020					
Phosphorus	(P)	157	150– 220					
Selenium	(Se)	0.69	0.55– 1.1					
Strontium	(Sr)	0.33	0.50– 7.6					
Sulfur	(S)	45400	44000– 50000					
Cobalt	(Co)	0.004	0.005– 0.040					
Iron	(Fe)	4.9	7.0– 16					
Germanium	(Ge)	0.036	0.030– 0.040					
Rubidium	(Rb)	0.098	0.007– 0.096					
Zirconium	(Zr)	0.008	0.020– 0.42					

SPECIMEN DATA		RATIOS		
COMMENTS:		ELEMENTS	RATIOS	RANGE
Date Collected: 03/22/2019		Ca/Mg	12.8	4– 30
Date Received: 03/26/2019		Ca/P	2.52	1– 12
Date Completed: 03/28/2019		Na/K	1.24	0.5– 10
Methodology: ICP/MS		Zn/Cu	22.3	4– 20
Sample Size: 0.196 g		Zn/Cd	> 999	> 800
Sample Type: Head				
Hair Color: Brown				
Treatment:				
Shampoo: Trader Joes				

### **Health history for hair test 817 (initial history in 2011)**

1. Current symptoms are fatigue and aches sometimes in joints. I definately think my thyroid is affected. My memory too. I had about 9 amalgams out one month ago.
2. I've never had wisdom teeth grow. I had 3 root canals and one fell apart and was extracted about 8 years ago. The last two were just extracted one month ago. The amalgams are over 40 years old.
3. I currently have a false front tooth with a bridge of caps on either side of it from thirty some years ago after a car accident. Not sure what the metal is made of on the part facing inside my mouth
4. My mother had false teeth before getting pregnant with me. Some dr. pulled them instead of straightening them.
5. I had some childhood immunizations and Hep B was mandatory for my job as and EMT about 12 years ago.
6. I really wasn't on any supplements when hair tests was taken.
8. I live by Atlantic City, NJ.