



< 5 F H9 GH% (+
 SEX: Female
 AGE: 62

Toxic & Essential Elements; Hair

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 th 95 th
Aluminum (Al)	3.3	< 7.0	
Antimony (Sb)	< 0.01	< 0.050	
Arsenic (As)	0.017	< 0.060	
Barium (Ba)	0.14	< 2.0	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	0.004	< 2.0	
Cadmium (Cd)	< 0.009	< 0.050	
Lead (Pb)	1.3	< 0.60	
Mercury (Hg)	0.25	< 0.80	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	< 0.001	< 0.002	
Uranium (U)	0.015	< 0.060	
Nickel (Ni)	0.05	< 0.30	
Silver (Ag)	0.01	< 0.15	
Tin (Sn)	0.10	< 0.30	
Titanium (Ti)	0.38	< 0.70	
Total Toxic Representation			

ESSENTIAL AND OTHER ELEMENTS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 2.5 th 16 th 50 th 84 th 97.5 th
Calcium (Ca)	259	300- 1200	
Magnesium (Mg)	74	35- 120	
Sodium (Na)	12	20- 250	
Potassium (K)	7	8- 75	
Copper (Cu)	47	11- 37	
Zinc (Zn)	160	140- 220	
Manganese (Mn)	0.09	0.08- 0.60	
Chromium (Cr)	0.27	0.40- 0.65	
Vanadium (V)	0.013	0.018- 0.065	
Molybdenum (Mo)	0.020	0.020- 0.050	
Boron (B)	1.9	0.25- 1.5	
Iodine (I)	0.21	0.25- 1.8	
Lithium (Li)	< 0.004	0.007- 0.020	
Phosphorus (P)	135	150- 220	
Selenium (Se)	0.53	0.55- 1.1	
Strontium (Sr)	0.44	0.50- 7.6	
Sulfur (S)	41500	44000- 50000	
Cobalt (Co)	0.005	0.005- 0.040	
Iron (Fe)	6.2	7.0- 16	
Germanium (Ge)	0.030	0.030- 0.040	
Rubidium (Rb)	0.008	0.007- 0.096	
Zirconium (Zr)	0.059	0.020- 0.42	

SPECIMEN DATA		RATIOS	
COMMENTS:		ELEMENTS	RATIOS
Date Collected: 08/01/2016		Ca/Mg	3.5
Date Received: 08/05/2016		Ca/P	1.92
Date Completed: 08/10/2016		Na/K	1.71
Methodology: ICP/MS		Zn/Cu	3.4
Sample Size: 0.197 g		Zn/Cd	> 999
Sample Type: Head			
Hair Color: Gray			
Treatment:			
Shampoo:			
		RANGE	
		4- 30	
		1- 12	
		0.5- 10	
		4- 20	
		> 800	

62 year old female in 2016

- 1) Loss of smell, balance, grinding teeth, IBS, Leaky Gut, LS, Vitiligo, achy joints, low variable body temperature, loss of hair, memory poor, brain fog swollen ankles, dry legs, cracked heels, raised lines on toe nails, low libido, and ringing in ears.
- 2) Wisdom teeth removed at 16, Had ten amalgams. Four root canals. Had 5 crowns with one with a metal base.
- 3) All amalgams replaced with resin in 2013. All root canals pulled in 2015. Metal based crown replaced with porcelain in 2016. No Hg left in mouth after 2016.
- 4) Have no idea of dental work mother had at time of pregnancy or birth.
- 5) Had flu shots periodically from 2005 to 2012.
- 6) ?
- 7) Played with mercury in high school, college.
- 8) Home base is in Holland, Michigan, United States. Spend 5+ months in Englewood, Florida and 3+ months in Spragg, Ontario