



SEX: Male
AGE: 50

Toxic & Essential Elements; Hair

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 th 95 th
Aluminum (Al)	2.0	< 7.0	
Antimony (Sb)	0.018	< 0.066	
Arsenic (As)	0.035	< 0.080	
Barium (Ba)	0.51	< 1.0	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	< 0.002	< 2.0	
Cadmium (Cd)	< 0.009	< 0.065	
Lead (Pb)	0.07	< 0.80	
Mercury (Hg)	0.82	< 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)	0.09	< 0.20	
Silver (Ag)	0.01	< 0.08	
Tin (Sn)	0.02	< 0.30	
Titanium (Ti)	0.32	< 0.60	
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)	269	200- 750			
Magnesium (Mg)	23	25- 75			
Sodium (Na)	13	20- 180			
Potassium (K)	4	9- 80			
Copper (Cu)	12	11- 30			
Zinc (Zn)	210	130- 200			
Manganese (Mn)	0.09	0.08- 0.50			
Chromium (Cr)	0.36	0.40- 0.70			
Vanadium (V)	0.038	0.018- 0.065			
Molybdenum (Mo)	0.023	0.025- 0.060			
Boron (B)	0.66	0.40- 3.0			
Iodine (I)	1.4	0.25- 1.8			
Lithium (Li)	< 0.004	0.007- 0.020			
Phosphorus (P)	166	150- 220			
Selenium (Se)	0.86	0.70- 1.2			
Strontium (Sr)	0.82	0.30- 3.5			
Sulfur (S)	49200	44000- 50000			
Cobalt (Co)	0.006	0.004- 0.020			
Iron (Fe)	6.5	7.0- 16			
Germanium (Ge)	0.034	0.030- 0.040			
Rubidium (Rb)	0.008	0.011- 0.12			
Zirconium (Zr)	0.059	0.020- 0.44			

SPECIMEN DATA		RATIOS		
COMMENTS:		ELEMENTS	RATIOS	RANGE
Date Collected: 11/19/2018	Sample Size: 0.195 g	Ca/Mg	11.7	4- 30
Date Received: 11/23/2018	Sample Type: Head	Ca/P	1.62	0.8- 8
Date Completed: 11/26/2018	Hair Color: Brown	Na/K	3.25	0.5- 10
Methodology: ICP/MS	Treatment:	Zn/Cu	17.5	4- 20
	Shampoo: Pert	Zn/Cd	> 999	> 800



SEX: Male
AGE: 51

Toxic & Essential Elements; Hair

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 th 95 th
Aluminum (Al)	1.9	< 7.0	
Antimony (Sb)	0.014	< 0.066	
Arsenic (As)	0.011	< 0.080	
Barium (Ba)	2.0	< 1.0	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	< 0.002	< 2.0	
Cadmium (Cd)	0.012	< 0.065	
Lead (Pb)	0.13	< 0.80	
Mercury (Hg)	0.24	< 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)	0.12	< 0.20	
Silver (Ag)	0.04	< 0.08	
Tin (Sn)	0.02	< 0.30	
Titanium (Ti)	0.24	< 0.60	
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)	842	200- 750			
Magnesium (Mg)	96	25- 75			
Sodium (Na)	120	20- 180			
Potassium (K)	27	9- 80			
Copper (Cu)	18	11- 30			
Zinc (Zn)	200	130- 200			
Manganese (Mn)	0.12	0.08- 0.50			
Chromium (Cr)	0.36	0.40- 0.70			
Vanadium (V)	0.020	0.018- 0.065			
Molybdenum (Mo)	0.013	0.025- 0.060			
Boron (B)	0.57	0.40- 3.0			
Iodine (I)	0.65	0.25- 1.8			
Lithium (Li)	0.027	0.007- 0.020			
Phosphorus (P)	167	150- 220			
Selenium (Se)	0.79	0.70- 1.2			
Strontium (Sr)	3.5	0.30- 3.5			
Sulfur (S)	48500	44000- 50000			
Cobalt (Co)	0.017	0.004- 0.020			
Iron (Fe)	5.9	7.0- 16			
Germanium (Ge)	0.035	0.030- 0.040			
Rubidium (Rb)	0.037	0.011- 0.12			
Zirconium (Zr)	0.031	0.020- 0.44			

SPECIMEN DATA		RATIOS		
COMMENTS:		ELEMENTS	RATIOS	RANGE
Date Collected: 05/18/2019	Sample Size: 0.197 g	Ca/Mg	8.77	4- 30
Date Received: 05/22/2019	Sample Type: Head	Ca/P	5.04	0.8- 8
Date Completed: 05/24/2019	Hair Color: Brown	Na/K	4.44	0.5- 10
Methodology: ICP/MS	Treatment:	Zn/Cu	11.1	4- 20
	Shampoo: Pert	Zn/Cd	> 999	> 800



SEX: Male
DOB: 12/08/1967

AGE: 51 - Follow-up test

Toxic & Essential Elements; Hair

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 th 95 th
Aluminum (Al)	1.7	< 7.0	
Antimony (Sb)	0.046	< 0.066	
Arsenic (As)	0.015	< 0.080	
Barium (Ba)	2.5	< 1.0	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	< 0.002	< 2.0	
Cadmium (Cd)	< 0.009	< 0.065	
Lead (Pb)	0.18	< 0.80	
Mercury (Hg)	0.44	< 0.80	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	< 0.001	< 0.002	
Uranium (U)	0.005	< 0.060	
Nickel (Ni)	0.17	< 0.20	
Silver (Ag)	0.04	< 0.08	
Tin (Sn)	0.04	< 0.30	
Titanium (Ti)	0.29	< 0.60	
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)	918	200- 750			
Magnesium (Mg)	130	25- 75			
Sodium (Na)	260	20- 180			
Potassium (K)	42	9- 80			
Copper (Cu)	20	11- 30			
Zinc (Zn)	190	130- 200			
Manganese (Mn)	0.13	0.08- 0.50			
Chromium (Cr)	0.36	0.40- 0.70			
Vanadium (V)	0.013	0.018- 0.065			
Molybdenum (Mo)	0.017	0.025- 0.060			
Boron (B)	0.25	0.40- 3.0			
Iodine (I)	0.22	0.25- 1.8			
Lithium (Li)	0.047	0.007- 0.020			
Phosphorus (P)	150	150- 220			
Selenium (Se)	1.0	0.70- 1.2			
Strontium (Sr)	5.3	0.30- 3.5			
Sulfur (S)	48800	44000- 50000			
Cobalt (Co)	0.008	0.004- 0.020			
Iron (Fe)	6.7	7.0- 16			
Germanium (Ge)	0.037	0.030- 0.040			
Rubidium (Rb)	0.057	0.011- 0.12			
Zirconium (Zr)	0.10	0.020- 0.44			

SPECIMEN DATA		RATIOS	
COMMENTS:		ELEMENTS	RATIOS
Date Collected: 11/19/2019		Ca/Mg	7.06
Date Received: 11/22/2019		Ca/P	6.12
Date Reported: 11/25/2019		Na/K	6.19
Methodology: ICP/MS		Zn/Cu	9.5
Sample Size: 0.197 g	Sample Type: Head	Zn/Cd	> 999
Hair Color: Brown	Treatment:		
Shampoo: Pert			
		RANGE	
		4- 30	
		0.8- 8	
		0.5- 10	
		4- 20	
		> 800	



SEX: Male
DOB: 12/08/1967

AGE: 52

Toxic & Essential Elements; Hair

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 th 95 th
Aluminum (Al)	2.0	< 7.0	
Antimony (Sb)	0.021	< 0.066	
Arsenic (As)	0.031	< 0.080	
Barium (Ba)	0.31	< 1.0	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	0.002	< 2.0	
Cadmium (Cd)	< 0.009	< 0.065	
Lead (Pb)	0.44	< 0.80	
Mercury (Hg)	0.15	< 0.80	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	< 0.001	< 0.002	
Uranium (U)	0.006	< 0.060	
Nickel (Ni)	0.09	< 0.20	
Silver (Ag)	0.04	< 0.08	
Tin (Sn)	0.04	< 0.30	
Titanium (Ti)	0.20	< 0.60	
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)	894	200- 750			
Magnesium (Mg)	360	25- 75			
Sodium (Na)	11	20- 180			
Potassium (K)	< 3	9- 80			
Copper (Cu)	18	11- 30			
Zinc (Zn)	370	130- 200			
Manganese (Mn)	0.15	0.08- 0.50			
Chromium (Cr)	0.43	0.40- 0.70			
Vanadium (V)	0.056	0.018- 0.065			
Molybdenum (Mo)	0.023	0.025- 0.060			
Boron (B)	3.3	0.40- 3.0			
Iodine (I)	0.71	0.25- 1.8			
Lithium (Li)	0.012	0.007- 0.020			
Phosphorus (P)	162	150- 220			
Selenium (Se)	0.89	0.70- 1.2			
Strontium (Sr)	5.6	0.30- 3.5			
Sulfur (S)	46300	44000- 50000			
Cobalt (Co)	0.004	0.004- 0.020			
Iron (Fe)	7.8	7.0- 16			
Germanium (Ge)	0.032	0.030- 0.040			
Rubidium (Rb)	0.003	0.011- 0.12			
Zirconium (Zr)	0.092	0.020- 0.44			

SPECIMEN DATA		RATIOS	
COMMENTS:		ELEMENTS	RATIOS
Date Collected: 05/06/2020		Ca/Mg	2.48
Date Received: 07/10/2020		Ca/P	5.52
Date Reported: 07/13/2020		Na/K	3.67
Methodology: ICP/MS		Zn/Cu	20.6
Sample Size: 0.197 g		Zn/Cd	> 999
Sample Type: Head			
Hair Color: Brown			
Treatment:			
Shampoo: Pert			
		RANGE	
		4- 30	
		0.8- 8	
		0.5- 10	
		4- 20	
		> 800	

Hair Test 1383

Health History

Background:

- 1) Current symptoms: anxiety, depression, low energy/motivation, not interested in much, withdrawn from life, can't focus, memory problems, don't sleep well, overly emotional, minor aches/pains (solid 4 hours/night plus 4 more awake/asleep/awake). On a GF and nightshade free mostly paleo diet (figured out nightshades in 2014, health has improved dramatically since then). Have other food sensitivities, minor sinus allergies.
- 2) Dental background: 2 mercury fillings when I was a child, braces for 2.5 years as a teen, 3 wisdom teeth pulled at 18. Dentists often tell me I have fantastic teeth which will all fall out due to receding gums despite them complimenting my good oral hygiene
- 3) Amalgams removed by a mercury-clueless dentist sometime around 2006-2010 (dentist no longer practices, no records) which roughly coincides w/ a steep dive in my health
- 4) Mother's dentistry - no clue
- 5) Standard vaccinations as a child for the time period (don't have a list). Travelled to South America in '93 (gamma globulin, OPV, Typhoid #1, Cholera #1, Tetanus/diphtheria), to India in 2008 (no records, sorry), allergy injections from age 18-22
- 6) Supplements:
D3 5000iu/day for 10 years
Mg 400mg/day for 10 years
Iodine 3mg/day (average, larger dose less often) for 1 year
Zn 90mg/day for 6 months
- 7) 50 year old male, 155lbs, 5'10"
- 8) Did 3 rounds of chelation prior to the test plus some aborted uses of ALA before I knew what I was getting into. Took Vit C 3000mg/day and Vit E 800mg/day since I started the chelation (starting early Oct). Had what I think was an adrenal crash after round 3.
- 9) Chapel Hill, North Carolina USA (grew up in Philadelphia, PA, 8 years in Pittsburgh, PA)

May 2019: Current supplements:

- 5-6g Vit C/day
- 1.7g Vit E/day
- 1.5g Inositol/day
- 400mg Mg/day
- 60mg Zn/day
- 100 ucg Se/day
- 5mg Li/day
- 1g Taurine/day
- 2g Glycine/day
- 4g Glutamine/day
- 480mg milk thistle/day
- 150mg ACE/day
- 1 tsp flax oil/day