

HAIR ELEMENTS



PATIENT: Number 157 - Mom (currently has one amalgam left)
SEX: Female
AGE: 38
Location: Pittsburgh, PA, USA

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	3.9	< 12		
Antimony	0.025	< 0.060		
Arsenic	0.032	< 0.090		
Beryllium	< 0.01	< 0.020		
Bismuth	0.35	< 2.0		
Cadmium	0.021	< 0.10		
Lead	0.12	< 1.0		
Mercury	< 0.03	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.008	< 0.060		
Nickel	0.06	< 0.40		
Silver	0.03	< 0.10		
Tin	0.12	< 0.30		
Titanium	0.71	< 1.0		
Total Toxic Representation				

ESSENTIAL AND OTHER ELEMENTS							
ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE				
			2.5 th	16 th	50 th	84 th	97.5 th
Calcium	233	475- 1500					
Magnesium	38	45- 180					
Sodium	370	24- 180					
Potassium	34	20- 80					
Copper	13	9.0- 24					
Zinc	180	130- 200					
Manganese	0.11	0.20- 0.65					
Chromium	0.35	0.20- 0.45					
Vanadium	0.024	0.018- 0.065					
Molybdenum	0.055	0.040- 0.10					
Boron	0.75	0.70- 4.0					
Iodine	0.24	0.25- 1.3					
Lithium	0.015	0.008- 0.040					
Phosphorus	254	350- 600					
Selenium	1.3	0.95- 1.7					
Strontium	0.28	1.0- 8.0					
Sulfur	44300	43000- 50000					
Barium	0.18	0.50- 5.0					
Cobalt	0.007	0.013- 0.050					
Iron	15	5.8- 14					
Germanium	0.034	0.045- 0.065					
Rubidium	0.025	0.030- 0.25					
Zirconium	0.69	0.040- 1.0					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 3/28/2008	Sample Size: 0.203 g			Ca/Mg	6.13	4- 30
Date Received: 4/2/2008	Sample Type: Pubic			Ca/P	0.917	1- 12
Date Completed: 4/4/2008	Hair Color:			Na/K	10.9	0.5- 10
	Treatment:			Zn/Cu	13.8	4- 20
Methodology: ICP-MS	Shampoo:			Zn/Cd	> 999	> 800
V06.99						

HAIR ELEMENTS



PATIENT: Number 159 - Dad (several amalgams)
SEX: Male
AGE: 38
Location: Pittsburgh, PA, USA

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	11	< 12		
Antimony	0.025	< 0.080		
Arsenic	0.078	< 0.12		
Beryllium	< 0.01	< 0.020		
Bismuth	0.054	< 2.0		
Cadmium	0.054	< 0.15		
Lead	0.47	< 2.0		
Mercury	0.12	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.014	< 0.060		
Nickel	0.13	< 0.40		
Silver	0.05	< 0.10		
Tin	0.09	< 0.30		
Titanium	0.66	< 1.0		
Total Toxic Representation				

ESSENTIAL AND OTHER ELEMENTS							
ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE				
			2.5 th	16 th	50 th	84 th	97.5 th
Calcium	433	375- 1100					
Magnesium	87	40- 140					
Sodium	380	24- 180					
Potassium	86	20- 80					
Copper	15	9.0- 26					
Zinc	120	120- 200					
Manganese	0.09	0.20- 0.65					
Chromium	0.46	0.20- 0.45					
Vanadium	0.037	0.018- 0.065					
Molybdenum	0.082	0.040- 0.10					
Boron	0.49	0.70- 4.0					
Iodine	0.25	0.25- 1.3					
Lithium	0.014	0.008- 0.040					
Phosphorus	235	250- 400					
Selenium	1.2	0.95- 1.7					
Strontium	0.39	1.0- 6.0					
Sulfur	44200	42000- 49000					
Barium	0.39	0.50- 3.0					
Cobalt	0.006	0.013- 0.050					
Iron	16	5.8- 14					
Germanium	0.032	0.045- 0.065					
Rubidium	0.080	0.030- 0.25					
Zirconium	2.2	0.040- 1.0					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 4/10/2008	Sample Size: 0.198 g			Ca/Mg	4.98	4- 30
Date Received: 4/16/2008	Sample Type: Pubic			Ca/P	1.84	0.8- 8
Date Completed: 4/22/2008	Hair Color: Brown			Na/K	4.42	0.5- 10
	Treatment:			Zn/Cu	8	4- 20
Methodology: ICP-MS	Shampoo:			Zn/Cd	> 999	> 800
			V06.99			

HAIR ELEMENTS



PATIENT: Number 160 - Son 1 (NT, but has strong body odor for his age)
SEX: Male
AGE: 8
Location: Pittsburgh, PA, USA

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	2.0	< 8.0		
Antimony	< 0.01	< 0.066		
Arsenic	0.036	< 0.080		
Beryllium	< 0.01	< 0.020		
Bismuth	0.19	< 2.0		
Cadmium	0.036	< 0.15		
Lead	0.34	< 1.0		
Mercury	0.09	< 0.40		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.057	< 0.060		
Nickel	0.10	< 0.40		
Silver	0.07	< 0.13		
Tin	0.10	< 0.30		
Titanium	0.59	< 1.0		
Total Toxic Representation				

ESSENTIAL AND OTHER ELEMENTS							
ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE				
			2.5 th	16 th	50 th	84 th	97.5 th
Calcium	198	160- 500					
Magnesium	16	12- 50					
Sodium	71	12- 90					
Potassium	14	10- 40					
Copper	62	9.0- 30					
Zinc	180	110- 190					
Manganese	0.11	0.18- 0.60					
Chromium	0.37	0.23- 0.50					
Vanadium	0.029	0.025- 0.10					
Molybdenum	0.033	0.040- 0.089					
Boron	0.14	0.50- 3.5					
Iodine	0.40	0.25- 1.3					
Lithium	0.005	0.007- 0.023					
Phosphorus	156	160- 250					
Selenium	0.70	0.95- 1.7					
Strontium	0.21	0.21- 2.1					
Sulfur	45400	45500- 53000					
Barium	0.21	0.19- 1.6					
Cobalt	0.004	0.013- 0.035					
Iron	9.8	6.0- 17					
Germanium	0.037	0.045- 0.065					
Rubidium	0.014	0.008- 0.080					
Zirconium	0.14	0.060- 0.70					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 4/9/2008	Sample Size: 0.199 g			Ca/Mg	12.4	4- 30
Date Received: 4/12/2008	Sample Type: Head			Ca/P	1.27	0.8- 8
Date Completed: 4/17/2008	Hair Color: Brown			Na/K	5.07	0.5- 10
	Treatment:			Zn/Cu	2.9	4- 20
Methodology: ICP-MS	Shampoo: Neutrogena			Zn/Cd	> 999	> 800

POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT µg/g	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	2.4	< 8.0	██████████	
Antimony	0.019	< 0.066	██████████	
Arsenic	0.092	< 0.080	████████████████████	
Beryllium	< 0.01	< 0.020		
Bismuth	0.31	< 2.0	██████████	
Cadmium	< 0.009	< 0.15		
Lead	0.41	< 1.0	██████████	
Mercury	0.10	< 0.40	██████████	
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.024	< 0.060	██████████	
Nickel	0.18	< 0.40	██████████	
Silver	0.06	< 0.13	██████████	
Tin	0.19	< 0.30	██████████	
Titanium	0.34	< 1.0	██████████	
Total Toxic Representation			██████████	

ESSENTIAL AND OTHER ELEMENTS

ELEMENTS	RESULT µg/g	REFERENCE RANGE	PERCENTILE				
			2.5 th	16 th	50 th	84 th	97.5 th
Calcium	122	160- 500	████████████████████	████████████████████	████████████████████		
Magnesium	8	12- 50	████████████████████	████████████████████	████████████████████		
Sodium	46	12- 90			████████████████████		
Potassium	14	10- 40		████████████████████	████████████████████		
Copper	62	9.0- 30			████████████████████		
Zinc	160	110- 190			████████████████████		
Manganese	0.05	0.18- 0.60	████████████████████	████████████████████	████████████████████		
Chromium	0.47	0.23- 0.50			████████████████████		
Vanadium	0.028	0.025- 0.10		████████████████████	████████████████████		
Molybdenum	0.051	0.040- 0.089			████████████████████		
Boron	0.19	0.50- 3.5	████████████████████	████████████████████	████████████████████		
Iodine	1.1	0.25- 1.3			████████████████████		
Lithium	< 0.004	0.007- 0.023	████████████████████	████████████████████	████████████████████		
Phosphorus	146	160- 250		████████████████████	████████████████████		
Selenium	0.71	0.95- 1.7		████████████████████	████████████████████		
Strontium	0.25	0.21- 2.1		████████████████████	████████████████████		
Sulfur	49900	45500- 53000			████████████████████		
Barium	0.05	0.19- 1.6	████████████████████	████████████████████	████████████████████		
Cobalt	0.003	0.013- 0.035	████████████████████	████████████████████	████████████████████		
Iron	8.2	6.0- 17			████████████████████		
Germanium	0.028	0.045- 0.065		████████████████████	████████████████████		
Rubidium	0.011	0.008- 0.080		████████████████████	████████████████████		
Zirconium	0.21	0.060- 0.70			████████████████████		

SPECIMEN DATA

RATIOS

COMMENTS: 0142430

Date Collected: 3/14/2008

Sample Size: 0.198 g

Date Received: 3/19/2008

Sample Type: Head

Date Completed: 3/22/2008

Hair Color:

Treatment:

Methodology: ICP-MS

Shampoo:

V06.99

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	15.3	4- 30
Ca/P	0.836	0.8- 8
Na/K	3.29	0.5- 10
Zn/Cu	2.58	4- 20
Zn/Cd	> 999	> 800

POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT µg/g	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
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 th	16 th	50 th	84 th	97.5 th
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

COMMENTS: 0142429

Date Collected: 3/13/2008 Sample Size: 0.196 g

Date Received: 3/19/2008 Sample Type: Head

Date Completed: 3/22/2008 Hair Color:

Methodology: ICP-MS Treatment:

Shampoo:

RATIOS

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