

HAIR ELEMENTS



PATIENT: Number 93
SEX: Female
AGE: 47
Location: Palo Alto, CA, USA.

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	7.6	< 7.0		
Antimony	< 0.01	< 0.050		
Arsenic	0.064	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.004	< 0.10		
Cadmium	< 0.009	< 0.10		
Lead	0.35	< 1.0		
Mercury	0.24	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.30	< 0.060		
Nickel	0.31	< 0.40		
Silver	0.27	< 0.15		
Tin	0.05	< 0.30		
Titanium	0.32	< 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	258	300- 1200					
Magnesium	22	35- 120					
Sodium	2	12- 90					
Potassium	3	8- 38					
Copper	12	12- 35					
Zinc	180	140- 220					
Manganese	0.08	0.15- 0.65					
Chromium	0.36	0.20- 0.40					
Vanadium	0.042	0.018- 0.065					
Molybdenum	0.037	0.028- 0.056					
Boron	0.19	0.30- 2.0					
Iodine	0.48	0.25- 1.3					
Lithium	0.006	0.007- 0.023					
Phosphorus	178	160- 250					
Selenium	1.1	0.95- 1.7					
Strontium	0.68	0.50- 7.6					
Sulfur	45400	44500- 52000					
Barium	0.36	0.26- 3.0					
Cobalt	0.025	0.013- 0.050					
Iron	9.2	5.4- 14					
Germanium	0.031	0.045- 0.065					
Rubidium	0.007	0.007- 0.096					
Zirconium	0.015	0.020- 0.42					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected:	10/31/2006	Sample Size:	0.201 g	Ca/Mg	11.7	4- 30
Date Received:	11/3/2006	Sample Type:	Head	Ca/P	1.45	1- 12
Date Completed:	11/9/2006	Hair Color:	Brown	Na/K	0.667	0.5- 10
		Treatment:		Zn/Cu	15	4- 20
Methodology:	ICP-MS	Shampoo:	Giovanni 5050	Zn/Cd	> 999	> 800
			V06.99			

HAIR ELEMENTS



PATIENT: Number 93a
SEX: Female
AGE: 48
Location: Palo Alto, CA, USA.

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	3.6	< 7.0		
Antimony	0.013	< 0.050		
Arsenic	0.067	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.022	< 2.0		
Cadmium	< 0.009	< 0.10		
Lead	0.31	< 1.0		
Mercury	0.34	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.084	< 0.060		
Nickel	0.61	< 0.40		
Silver	0.02	< 0.15		
Tin	0.05	< 0.30		
Titanium	0.33	< 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	196	300- 1200					
Magnesium	68	35- 120					
Sodium	37	12- 90					
Potassium	23	8- 38					
Copper	10	12- 35					
Zinc	160	140- 220					
Manganese	0.12	0.15- 0.65					
Chromium	0.50	0.20- 0.40					
Vanadium	0.091	0.018- 0.065					
Molybdenum	0.16	0.028- 0.056					
Boron	0.56	0.30- 2.0					
Iodine	0.37	0.25- 1.3					
Lithium	0.006	0.007- 0.023					
Phosphorus	147	160- 250					
Selenium	1.5	0.95- 1.7					
Strontium	0.51	0.50- 7.6					
Sulfur	45000	44500- 52000					
Barium	0.31	0.26- 3.0					
Cobalt	0.022	0.013- 0.050					
Iron	5.3	5.4- 14					
Germanium	0.026	0.045- 0.065					
Rubidium	0.031	0.007- 0.096					
Zirconium	0.064	0.020- 0.42					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 6/4/2007	Sample Size: 0.202 g			Ca/Mg	2.88	4- 30
Date Received: 6/6/2007	Sample Type: Head			Ca/P	1.33	1- 12
Date Completed: 6/8/2007	Hair Color: Brown			Na/K	1.61	0.5- 10
	Treatment:			Zn/Cu	16	4- 20
Methodology: ICP-MS	Shampoo: Giovanni			Zn/Cd	> 999	> 800

V06.99