

HAIR ELEMENTS



PATIENT: Nouber 49
SEX: Female
AGE: 11

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	3.7	< 8.0		
Antimony	0.028	< 0.066		
Arsenic	0.042	< 0.060		
Beryllium	< 0.01	< 0.020		
Bismuth	0.024	< 0.12		
Cadmium	0.059	< 0.10		
Lead	0.19	< 1.0		
Mercury	0.05	< 0.40		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.013	< 0.060		
Nickel	0.10	< 0.40		
Silver	0.01	< 0.16		
Tin	0.04	< 0.30		
Titanium	0.56	< 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	569	250- 800					
Magnesium	64	25- 90					
Sodium	280	12- 90					
Potassium	16	7- 40					
Copper	15	12- 35					
Zinc	240	120- 220					
Manganese	0.11	0.18- 0.60					
Chromium	0.35	0.23- 0.45					
Vanadium	0.016	0.025- 0.10					
Molybdenum	< 0.01	0.037- 0.083					
Boron	0.55	0.30- 1.7					
Iodine	0.38	0.25- 1.3					
Lithium	0.006	0.007- 0.023					
Phosphorus	214	160- 250					
Selenium	0.94	0.95- 1.7					
Strontium	0.72	0.37- 3.6					
Sulfur	47400	45500- 53000					
Barium	1.1	0.21- 1.9					
Cobalt	0.011	0.013- 0.050					
Iron	7.5	6.0- 17					
Germanium	0.032	0.045- 0.065					
Rubidium	0.011	0.008- 0.080					
Zirconium	0.064	0.030- 0.40					

SPECIMEN DATA				RATIOS		
COMMENTS:				ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected: 1/3/2007	Sample Size: 0.2 g			Ca/Mg	8.89	4- 30
Date Received: 1/5/2007	Sample Type: Head			Ca/P	2.66	1- 12
Date Completed: 1/8/2007	Hair Color: Brown			Na/K	17.5	0.5- 10
	Treatment:			Zn/Cu	16	4- 20
Methodology: ICP-MS	Shampoo: Suave			Zn/Cd	> 999	> 800

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