

HAIR ELEMENTS



PATIENT: Number 117
SEX: Female
AGE: 56
Location: Cape Town, RSA

POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	6.5	< 12		
Antimony	0.56	< 0.060		
Arsenic	0.060	< 0.090		
Beryllium	< 0.01	< 0.020		
Bismuth	0.004	< 2.0		
Cadmium	0.038	< 0.10		
Lead	0.32	< 1.0		
Mercury	0.61	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.001	< 0.060		
Nickel	0.29	< 0.40		
Silver	0.18	< 0.10		
Tin	0.06	< 0.30		
Titanium	0.53	< 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	1060	475- 1500					
Magnesium	32	45- 180					
Sodium	110	24- 180					
Potassium	53	20- 80					
Copper	37	9.0- 24					
Zinc	190	130- 200					
Manganese	0.18	0.20- 0.65					
Chromium	0.50	0.20- 0.45					
Vanadium	0.042	0.018- 0.065					
Molybdenum	0.039	0.040- 0.10					
Boron	4.2	0.70- 4.0					
Iodine	0.26	0.25- 1.3					
Lithium	< 0.004	0.008- 0.040					
Phosphorus	252	350- 600					
Selenium	0.82	0.95- 1.7					
Strontium	1.7	1.0- 8.0					
Sulfur	45700	43000- 50000					
Barium	0.37	0.50- 5.0					
Cobalt	0.022	0.013- 0.050					
Iron	11	5.8- 14					
Germanium	0.035	0.045- 0.065					
Rubidium	0.056	0.030- 0.25					
Zirconium	0.22	0.040- 1.0					

SPECIMEN DATA

COMMENTS:
 Date Collected: 10/1/2007 Sample Size: 0.199 g
 Date Received: 10/5/2007 Sample Type: Pubic
 Date Completed: 10/8/2007 Hair Color:
 Treatment:
 Methodology: ICP-MS Shampoo:

RATIOS

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	33.1	4- 30
Ca/P	4.21	1- 12
Na/K	2.08	0.5- 10
Zn/Cu	5.14	4- 20
Zn/Cd	> 999	> 800

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