

HAIR ELEMENTS



PATIENT: Number 327
SEX: Female
AGE: 39
LOCATION: Cape Town, South Africa

POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	15	< 12		
Antimony	0.031	< 0.060		
Arsenic	0.068	< 0.090		
Barium	1.1	< 2.0		
Beryllium	< 0.01	< 0.020		
Bismuth	0.027	< 2.0		
Cadmium	0.039	< 0.050		
Lead	0.72	< 1.0		
Mercury	0.03	< 0.80		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.002		
Thorium	< 0.001	< 0.002		
Uranium	0.001	< 0.060		
Nickel	0.08	< 0.40		
Silver	0.02	< 0.10		
Tin	0.07	< 0.30		
Titanium	0.86	< 1.3		
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	725	475- 1500					
Magnesium	34	45- 180					
Sodium	35	80- 450					
Potassium	37	28- 160					
Copper	13	11- 30					
Zinc	150	130- 200					
Manganese	0.34	0.15- 0.65					
Chromium	0.59	0.40- 0.65					
Vanadium	0.048	0.018- 0.065					
Molybdenum	0.053	0.040- 0.10					
Boron	0.77	0.40- 4.0					
Iodine	0.37	0.25- 1.8					
Lithium	0.015	0.008- 0.030					
Phosphorus	299	250- 500					
Selenium	0.84	0.80- 1.3					
Strontium	1.6	1.0- 8.0					
Sulfur	47000	42000- 48000					
Cobalt	0.015	0.006- 0.035					
Iron	11	7.0- 16					
Germanium	0.037	0.030- 0.040					
Rubidium	0.043	0.030- 0.25					
Zirconium	1.7	0.040- 1.0					

SPECIMEN DATA

COMMENTS:
 Date Collected: 12/3/2009 Sample Size: 0.171 g
 Date Received: 12/21/2009 Sample Type: Pubic
 Date Completed: 12/26/2009 Hair Color:
 Client Reference: Treatment:
 Methodology: ICP-MS Shampoo:

RATIOS

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	21.3	4- 30
Ca/P	2.42	1- 12
Na/K	0.946	0.5- 10
Zn/Cu	11.5	4- 20
Zn/Cd	> 999	> 800

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