

HAIR ELEMENTS



PATIENT: Number 111
SEX: Male
AGE: 18
Location: Cape Town, RSA

POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	6.9	< 7.0		
Antimony	0.020	< 0.066		
Arsenic	0.034	< 0.080		
Beryllium	< 0.01	< 0.020		
Bismuth	0.016	< 2.0		
Cadmium	0.010	< 0.15		
Lead	0.23	< 2.0		
Mercury	0.40	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	< 0.001	< 0.060		
Nickel	0.26	< 0.40		
Silver	0.12	< 0.12		
Tin	0.05	< 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	1760	200- 750					
Magnesium	71	25- 75					
Sodium	42	12- 90					
Potassium	34	9- 40					
Copper	17	10- 28					
Zinc	220	130- 200					
Manganese	0.18	0.15- 0.65					
Chromium	0.39	0.20- 0.40					
Vanadium	0.040	0.018- 0.065					
Molybdenum	0.027	0.025- 0.064					
Boron	0.38	0.40- 3.0					
Iodine	0.52	0.25- 1.3					
Lithium	0.011	0.007- 0.023					
Phosphorus	278	160- 250					
Selenium	1.5	0.95- 1.7					
Strontium	2.1	0.30- 3.5					
Sulfur	48800	44500- 52000					
Barium	0.87	0.16- 1.6					
Cobalt	0.011	0.013- 0.035					
Iron	8.2	5.4- 13					
Germanium	0.027	0.045- 0.065					
Rubidium	0.031	0.011- 0.12					
Zirconium	0.075	0.020- 0.44					

SPECIMEN DATA

COMMENTS:
 Date Collected: 8/18/2007 Sample Size: 0.199 g
 Date Received: 9/13/2007 Sample Type: Head
 Date Completed: 9/18/2007 Hair Color: Black
 Treatment:
 Methodology: ICP-MS Shampoo:

RATIOS

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	24.8	4- 30
Ca/P	6.33	0.8- 8
Na/K	1.24	0.5- 10
Zn/Cu	12.9	4- 20
Zn/Cd	> 999	> 800

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