

HAIR ELEMENTS



PATIENT: Number 234
SEX: Female
AGE: 48
LOCATION: Cape Town, RSA

POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	4.1	< 7.0		
Antimony	0.030	< 0.050		
Arsenic	0.025	< 0.060		
Barium	1.0	< 2.0		
Beryllium	< 0.01	< 0.020		
Bismuth	0.076	< 2.0		
Cadmium	0.057	< 0.050		
Lead	2.2	< 0.60		
Mercury	0.75	< 0.80		
Platinum	0.004	< 0.005		
Thallium	0.001	< 0.002		
Thorium	0.001	< 0.002		
Uranium	0.011	< 0.060		
Nickel	0.41	< 0.30		
Silver	0.13	< 0.15		
Tin	0.04	< 0.30		
Titanium	0.36	< 0.70		
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	1590	300- 1200					
Magnesium	120	35- 120					
Sodium	37	20- 250					
Potassium	8	8- 75					
Copper	26	11- 37					
Zinc	290	140- 220					
Manganese	0.29	0.08- 0.60					
Chromium	0.44	0.40- 0.65					
Vanadium	0.027	0.018- 0.065					
Molybdenum	0.026	0.020- 0.050					
Boron	0.35	0.25- 1.5					
Iodine	0.32	0.25- 1.8					
Lithium	0.028	0.007- 0.020					
Phosphorus	192	150- 220					
Selenium	0.72	0.55- 1.1					
Strontium	4.9	0.50- 7.6					
Sulfur	46100	44000- 50000					
Cobalt	0.12	0.005- 0.040					
Iron	11	7.0- 16					
Germanium	0.031	0.030- 0.040					
Rubidium	0.008	0.007- 0.096					
Zirconium	0.12	0.020- 0.042					

SPECIMEN DATA

COMMENTS:

Date Collected: 11/16/2008 Sample Size: 0.152 g
 Date Received: 12/4/2008 Sample Type: Head
 Date Completed: 12/9/2008 Hair Color: Brown
 Client Reference: Treatment:
 Methodology: ICP-MS Shampoo:

RATIOS

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	13.3	4- 30
Ca/P	8.28	1- 12
Na/K	4.63	0.5- 10
Zn/Cu	11.2	4- 20
Zn/Cd	> 999	> 800

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