

HAIR ELEMENTS



Name: Patient 76
 SEX: Female
 AGE: 5
 Location: Cape Town, South Africa

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	5.3	< 8.0		
Antimony	0.018	< 0.066		
Arsenic	0.081	< 0.080		
Beryllium	< 0.01	< 0.020		
Bismuth	0.043	< 2.0		
Cadmium	0.032	< 0.10		
Lead	0.43	< 1.0		
Mercury	0.72	< 0.40		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.008	< 0.060		
Nickel	0.05	< 0.40		
Silver	0.05	< 0.20		
Tin	0.13	< 0.30		
Titanium	0.55	< 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	159	140- 500					
Magnesium	8	15- 45					
Sodium	18	12- 90					
Potassium	10	9- 60					
Copper	8.4	10- 22					
Zinc	340	100- 190					
Manganese	0.09	0.20- 0.55					
Chromium	0.35	0.26- 0.50					
Vanadium	0.049	0.030- 0.10					
Molybdenum	0.041	0.048- 0.13					
Boron	0.28	0.35- 3.0					
Iodine	0.22	0.25- 1.3					
Lithium	0.006	0.007- 0.023					
Phosphorus	160	160- 250					
Selenium	0.70	0.95- 1.7					
Strontium	0.28	0.19- 2.0					
Sulfur	47400	45500- 53000					
Barium	0.27	0.16- 1.2					
Cobalt	0.008	0.013- 0.035					
Iron	13	8.0- 19					
Germanium	0.041	0.045- 0.065					
Rubidium	0.012	0.012- 0.16					
Zirconium	0.034	0.030- 1.0					

SPECIMEN DATA			RATIOS		
COMMENTS:			ELEMENTS	RATIOS	EXPECTED RANGE
Date Collected:	Sample Size:	0.199 g	Ca/Mg	19.9	4- 30
Date Received: 5/9/2007	Sample Type:	Head	Ca/P	0.994	1- 12
Date Completed: 5/12/2007	Hair Color:		Na/K	1.8	0.5- 10
Methodology: ICP-MS	Treatment:		Zn/Cu	40.5	4- 20
	Shampoo:		Zn/Cd	> 999	> 800

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