

# HAIR ELEMENTS



PATIENT: No 22  
 SEX: Female  
 AGE: 43  
 Location: Cape Town, South Africa

POTENTIALLY TOXIC ELEMENTS				
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 <sup>th</sup>	95 <sup>th</sup>
Aluminum	3.6	< 12		
Antimony	0.11	< 0.060		
Arsenic	0.047	< 0.090		
Beryllium	< 0.01	< 0.020		
Bismuth	< 0.002	< 0.13		
Cadmium	0.053	< 0.10		
Lead	0.72	< 1.0		
Mercury	2.2	< 1.1		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.010		
Thorium	< 0.001	< 0.005		
Uranium	0.003	< 0.060		
Nickel	0.17	< 0.40		
Silver	0.29	< 0.10		
Tin	0.09	< 0.30		
Titanium	0.47	< 1.0		
Total Toxic Representation				

ESSENTIAL AND OTHER ELEMENTS							
ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE				
			2.5 <sup>th</sup>	16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup>	97.5 <sup>th</sup>
Calcium	1790	475- 1500					
Magnesium	61	45- 180					
Sodium	260	24- 180					
Potassium	110	20- 80					
Copper	10	9.0- 24					
Zinc	210	130- 200					
Manganese	0.28	0.20- 0.65					
Chromium	0.47	0.20- 0.45					
Vanadium	0.031	0.018- 0.065					
Molybdenum	0.052	0.040- 0.10					
Boron	4.2	0.70- 4.0					
Iodine	0.68	0.25- 1.3					
Lithium	0.032	0.008- 0.040					
Phosphorus	329	350- 600					
Selenium	1.0	0.95- 1.7					
Strontium	3.7	1.0- 8.0					
Sulfur	43100	43000- 50000					
Barium	2.2	0.50- 5.0					
Cobalt	0.47	0.013- 0.050					
Iron	9.5	5.8- 14					
Germanium	0.032	0.045- 0.065					
Rubidium	0.11	0.030- 0.25					
Zirconium	0.054	0.040- 1.0					

SPECIMEN DATA				RATIOS		
<b>COMMENTS:</b>				<b>ELEMENTS</b>	<b>RATIOS</b>	<b>EXPECTED RANGE</b>
Date Collected:	10/11/2006	Sample Size:	0.2 g	Ca/Mg	29.3	4- 30
Date Received:	10/18/2006	Sample Type:	Pubic	Ca/P	5.44	1- 12
Date Completed:	10/20/2006	Hair Color:	Black	Na/K	2.36	0.5- 10
		Treatment:		Zn/Cu	21	4- 20
Methodology:	ICP-MS	Shampoo:	Soap Enchantrix	Zn/Cd	> 999	> 800
			V06.99			