

HAIR ELEMENTS



PATIENT: Number 189
SEX: Male
AGE: 4
LOCATION: Sydney, AUS

POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	15	< 8.0		
Antimony	0.11	< 0.066		
Arsenic	0.083	< 0.080		
Barium	0.60	< 0.50		
Beryllium	< 0.01	< 0.020		
Bismuth	0.033	< 2.0		
Cadmium	0.24	< 0.070		
Lead	1.6	< 1.0		
Mercury	0.21	< 0.40		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.002		
Thorium	< 0.001	< 0.002		
Uranium	0.005	< 0.060		
Nickel	0.41	< 0.20		
Silver	0.51	< 0.20		
Tin	0.40	< 0.30		
Titanium	0.82	< 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	326	125- 370					
Magnesium	140	12- 30					
Sodium	260	20- 200					
Potassium	310	12- 200					
Copper	38	11- 18					
Zinc	190	100- 190					
Manganese	0.20	0.10- 0.50					
Chromium	0.46	0.43- 0.80					
Vanadium	0.056	0.030- 0.10					
Molybdenum	0.12	0.050- 0.13					
Boron	1.1	0.70- 5.0					
Iodine	0.97	0.25- 1.3					
Lithium	0.008	0.007- 0.020					
Phosphorus	265	150- 220					
Selenium	0.83	0.70- 1.1					
Strontium	1.3	0.16- 1.0					
Sulfur	52700	45500- 53000					
Cobalt	0.13	0.004- 0.020					
Iron	12	7.0- 16					
Germanium	0.038	0.030- 0.040					
Rubidium	0.39	0.016- 0.18					
Zirconium	0.095	0.040- 1.0					

SPECIMEN DATA

COMMENTS:
 Date Collected: 11/24/2008 Sample Size: 0.195 g
 Date Received: 12/1/2008 Sample Type: Head
 Date Completed: 12/10/2008 Hair Color: Brown
 Client Reference: Treatment:
 Methodology: ICP-MS Shampoo: Avalon Organic

RATIOS

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	2.33	4- 30
Ca/P	1.23	0.8- 8
Na/K	0.839	0.5- 10
Zn/Cu	5	4- 20
Zn/Cd	792	> 800

Details for Hair Test 189

1/ Current symptoms / health history? My son is 4 ½ years old. He's had digestive issues his whole life. As a breastfed baby he 'failed to thrive' and was tested for coeliac disease (many times – always negative). He was diagnosed with reflux as a baby. He always suffered shocking constipation, bloating and stomach pains. He was diagnosed as 2 ½ with a 'severe speech delay' with autistic traits. I then tried him on a gluten and casein free diet – and it appeared many of his problems came from food intolerances. His speech is improving, however he has developed a stutter. He had also had issues with Candida, and antibiotics don't agree with him. This is his first hair analysis

2/ Dental History? None

3/ Dental Work? None

4/ Mother's Dentistry?? None during pregnancy. Has a couple of fillings in the years before (including 6 in baby teeth, which have all since fallen out). Regular fluoride treatment

5/ Vaccinations? Up to 18months: Diphtheria x3, Tetanus x3, Pertussis x3, Hep B x3, Hib x3, Polio x3, Pneumococcal x2, (MMR) (12months), Meningococcal C, Varicella

6/ Supplements and medications? DAILY: 1 capsule Primer Undermethylating, 1 digestive enzyme, 1ml zinc. ¼ teasp calcium, ¼ teasp magnesium, 5ml Cod Liver Oil, ½ teasp Probiotic, ½ teasp colon cleanse, sometimes ½ teasp Vit C, (sometimes asthma puffer)

7/ Other information? His language development halted after first dose of antibiotics at 21months. Antibiotics also bring on thrush in the mouth.

8/ From? Sydney, Australia



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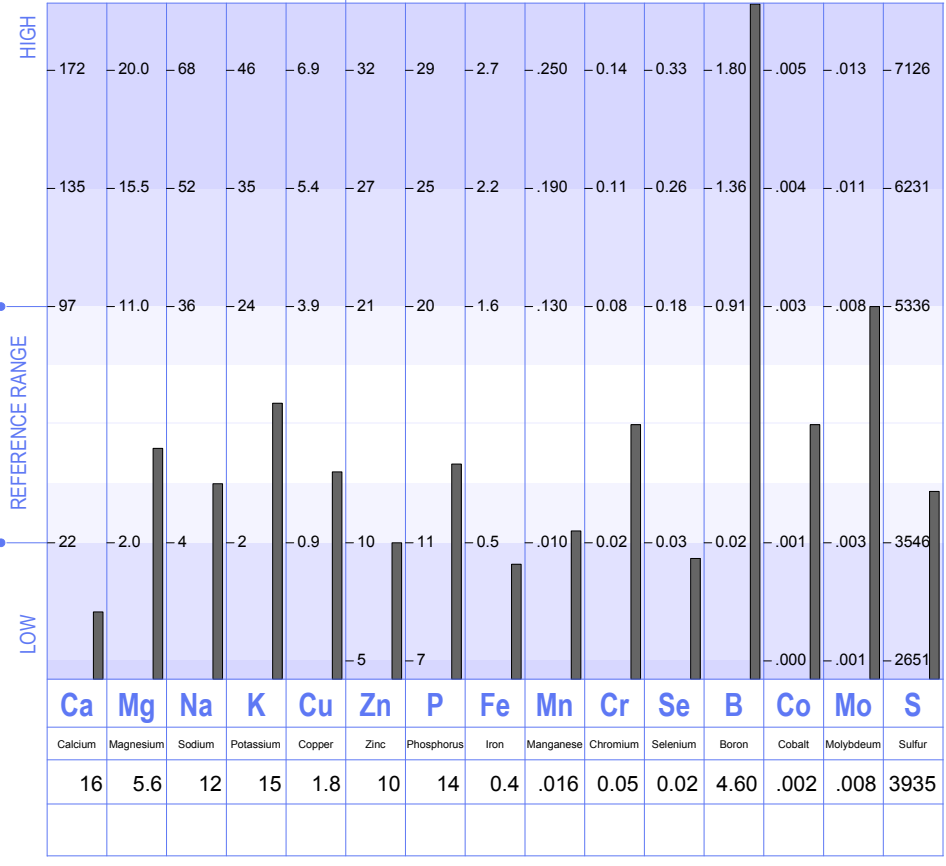
LABORATORY NO.: 894458

PROFILE NO.: 2 SAMPLE TYPE: SCA

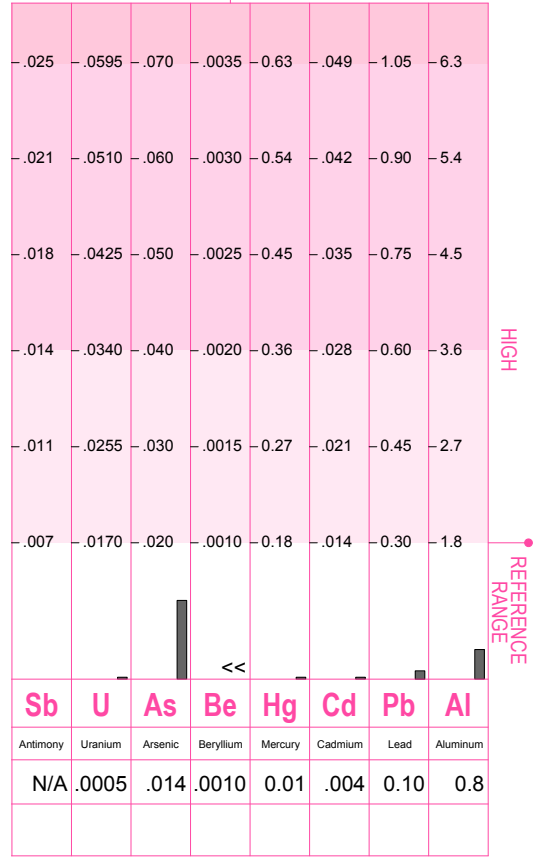
PATIENT: Number 189 Age: 4 Sex: Male AGE: SEX: METABOLIC TYPE:

REQUESTED BY: 24/06/2008 ACCOUNT NO.: DATE:

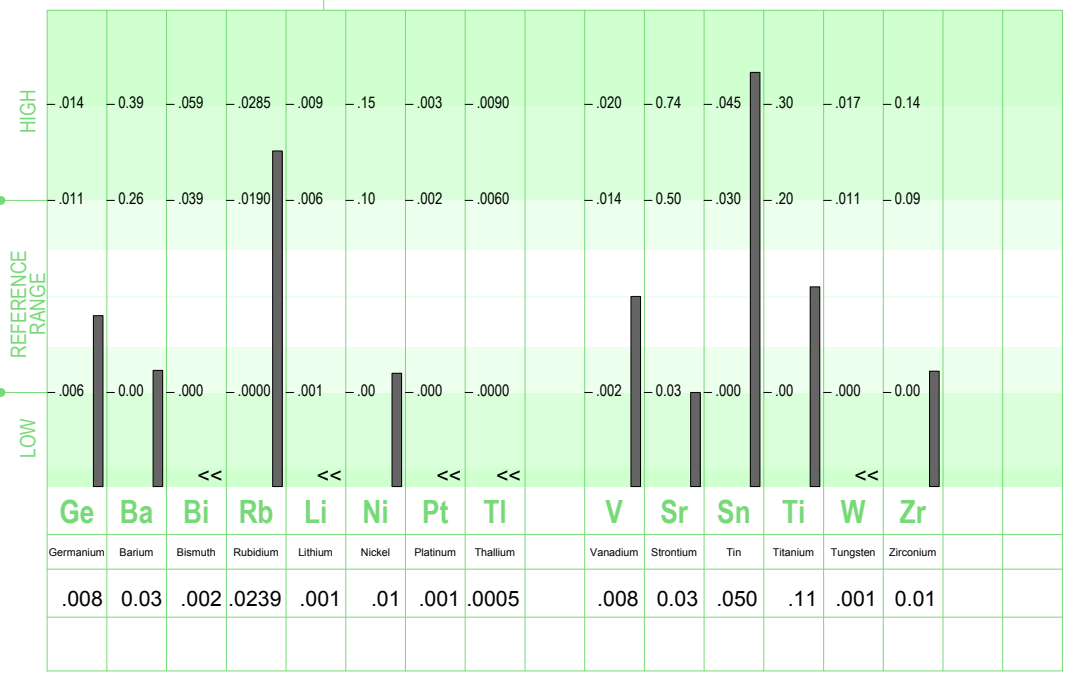
NUTRITIONAL ELEMENTS



TOXIC ELEMENTS



ADDITIONAL ELEMENTS



"<<": Below Calibration Limit; Value Given Is Calibration Limit

"QNS": Sample Size Was Inadequate For Analysis.

"N/A": Currently Not Available

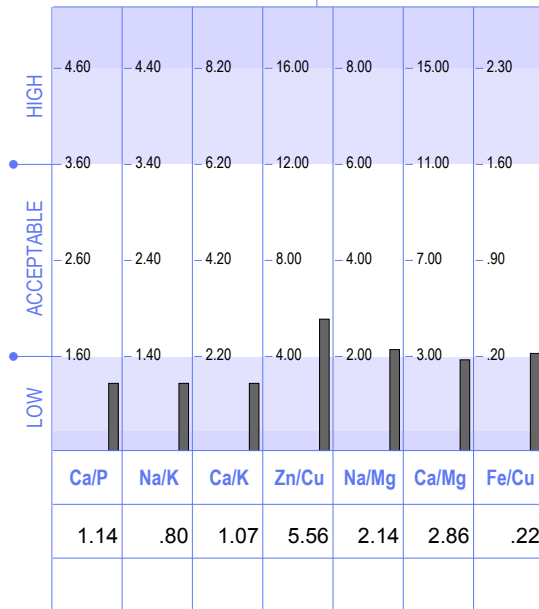
Ideal Levels And Interpretation Have Been Based On Hair Samples Obtained From The Mid-Parietal To The Occipital Region Of The Scalp.

Laboratory Analysis Provided by Trace Elements, Inc., an H. H. S. Licensed Clinical Laboratory. No. 45 D0481787

24/06/2008
 CURRENT TEST RESULTS

PREVIOUS TEST RESULTS

SIGNIFICANT RATIOS



TOXIC RATIOS



ADDITIONAL RATIOS

RATIO	CALCULATED VALUE		EXPECTED
	Current	Previous	
Ca/Sr	533.33		131/1
Cr/V	6.25		13/1
Cu/Mo	225.00		625/1
Fe/Co	200.00		440/1
K/Co	7500.00		2000/1
K/Li	15000.00		2500/1
Mg/B	1.22		40/1
S/Cu	2186.11		1138/1
Se/Tl	40.00		37/1
Se/Sn	.40		0.67/1
Zn/Sn	200.00		167/1

LEVELS

All mineral levels are reported in milligrams percent (milligrams per one-hundred grams of hair). One milligram percent (mg%) is equal to ten parts per million (ppm).

NUTRITIONAL ELEMENTS

Extensively studied, the nutrient elements have been well defined and are considered essential for many biological functions in the human body. They play key roles in such metabolic processes as muscular activity, endocrine function, reproduction, skeletal integrity and overall development.

TOXIC ELEMENTS

The toxic elements or "heavy metals" are well-known for their interference upon normal biochemical function. They are commonly found in the environment and therefore are present to some degree, in all biological systems. However, these metals clearly pose a concern for toxicity when accumulation occurs to excess.

ADDITIONAL ELEMENTS

These elements are considered as possibly essential by the human body. Additional studies are being conducted to better define their requirements and amounts needed.

RATIOS

A calculated comparison of two elements to each other is called a ratio. To calculate a ratio value, the first mineral level is divided by the second mineral level.

EXAMPLE: A sodium (Na) test level of 24 mg% divided by a potassium (K) level of 10 mg% equals a Na/K ratio of 2.4 to 1.

SIGNIFICANT RATIOS

If the synergistic relationship (or ratio) between certain minerals in the body is disturbed, studies show that normal biological functions and metabolic activity can be adversely affected. Even at extremely low concentrations, the synergistic and/or antagonistic relationships between minerals still exist, which can indirectly affect metabolism.

TOXIC RATIOS

It is important to note that individuals with elevated toxic levels may not always exhibit clinical symptoms associated with those particular toxic minerals. However, research has shown that toxic minerals can also produce an antagonistic effect on various essential minerals eventually leading to disturbances in their metabolic utilization.

ADDITIONAL RATIOS

These ratios are being reported solely for the purpose of gathering research data. This information will then be used to help the attending health-care professional in evaluating their impact upon health.

REFERENCE RANGES

Generally, reference ranges should be considered as guidelines for comparison with the reported test values. These reference ranges have been statistically established from studying an international population of "healthy" individuals.

Important Note: The reference ranges should not be considered as absolute limits for determining deficiency, toxicity or acceptance.