

# HAIR ELEMENTS



**PATIENT: Number 233**  
**SEX: Male**  
**AGE: 7**  
**LOCATION: Grand Rapids, Michigan, USA**

## POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT µg/g	REFERENCE RANGE	PERCENTILE	
			68 <sup>th</sup>	95 <sup>th</sup>
Aluminum	4.0	< 8.0		
Antimony	0.26	< 0.066		
Arsenic	0.091	< 0.080		
Barium	0.33	< 0.75		
Beryllium	< 0.01	< 0.020		
Bismuth	0.049	< 2.0		
Cadmium	0.11	< 0.070		
Lead	0.36	< 1.0		
Mercury	0.04	< 0.40		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.002		
Thorium	0.001	< 0.002		
Uranium	0.002	< 0.060		
Nickel	0.12	< 0.20		
Silver	0.07	< 0.14		
Tin	0.53	< 0.30		
Titanium	0.18	< 0.70		
Total Toxic Representation				

## ESSENTIAL AND OTHER ELEMENTS

ELEMENTS	RESULT µg/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	240	160- 500					
Magnesium	19	12- 50					
Sodium	170	20- 200					
Potassium	98	12- 140					
Copper	9.8	11- 32					
Zinc	160	110- 190					
Manganese	0.25	0.08- 0.50					
Chromium	0.41	0.40- 0.70					
Vanadium	0.046	0.025- 0.10					
Molybdenum	0.040	0.040- 0.090					
Boron	2.5	0.50- 3.5					
Iodine	0.24	0.25- 1.3					
Lithium	0.006	0.007- 0.020					
Phosphorus	145	150- 220					
Selenium	0.95	0.70- 1.1					
Strontium	0.17	0.21- 2.1					
Sulfur	50400	44000- 51000					
Cobalt	0.006	0.004- 0.020					
Iron	10	7.0- 16					
Germanium	0.035	0.030- 0.040					
Rubidium	0.078	0.008- 0.080					
Zirconium	0.65	0.060- 0.70					

### SPECIMEN DATA

**COMMENTS:**  
 Date Collected: 11/22/2008      Sample Size: 0.202 g  
 Date Received: 12/5/2008      Sample Type: Head  
 Date Completed: 12/10/2008      Hair Color: Brown  
 Client Reference:      Treatment:  
 Methodology: ICP-MS      Shampoo: Suave Kids

### RATIOS

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	12.6	4- 30
Ca/P	1.66	0.8- 8
Na/K	1.73	0.5- 10
Zn/Cu	16.3	4- 20
Zn/Cd	> 999	> 800

V010.08

## **Health history 233**

### Age 7

- 1- Current symptoms/health history – Difficulty sleeping all night as an infant, vomited formula often, ear infections when young, eczema, 3-4 widely spaced episodes of burning mouth, asthma diagnosed at age 4, blinking of eyes and other facial tics (started May, 2008) come and go, sometimes severe, food allergies/picky eater, instant vomiting if forced to eat something he doesn't like, warts on toes and fingers (difficult to get rid of, keep coming back), photophobia since a young age, difficulty remembering events and words to songs, delayed baby tooth loss compared to classmates, impulsivity in actions as a toddler/preschooler, articulation problems – the word 'car' sounds like 'cow', repetitive speech such as, "I'm going to eat you!"
- 2- Dental history – no amalgam fillings, has lost two bottom baby teeth so far.
- 3- No dental work in place, no dental cleanup needed.
- 4- Mother had routine cleanings during pregnancy, no amalgams placed.
- 5- Vaccinations – usual prescribed vaccinations, probably many preserved with thimerosal.
- 6- Supplements/medications for 6 months prior to hair test – Flovent, an asthma inhaler, once per day at bedtime, and a daily multi-vitamin/mineral supplement (L'il Critters Gummy Vites).
- 7- Doesn't like to be kissed, hugged, but tries his best to be obedient.
- 8- Grand Rapids, Michigan, USA.