



PATIENT: Number 794
 SEX: Female
 AGE: 28

Toxic & Essential Elements; Hair

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 th 95 th
Aluminum (Al)	1.8	< 7.0	
Antimony (Sb)	0.019	< 0.050	
Arsenic (As)	0.014	< 0.060	
Barium (Ba)	0.19	< 2.0	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	0.024	< 2.0	
Cadmium (Cd)	0.009	< 0.050	
Lead (Pb)	0.10	< 0.60	
Mercury (Hg)	0.05	< 0.80	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	< 0.001	< 0.002	
Uranium (U)	0.012	< 0.060	
Nickel (Ni)	0.15	< 0.30	
Silver (Ag)	0.05	< 0.15	
Tin (Sn)	0.19	< 0.30	
Titanium (Ti)	0.19	< 0.70	
Total Toxic Representation			

ESSENTIAL AND OTHER ELEMENTS					
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 2.5 th 16 th 50 th 84 th 97.5 th		
Calcium (Ca)	430	300- 1200			
Magnesium (Mg)	180	35- 120			
Sodium (Na)	10	20- 250			
Potassium (K)	3	8- 75			
Copper (Cu)	13	11- 37			
Zinc (Zn)	190	140- 220			
Manganese (Mn)	0.35	0.08- 0.60			
Chromium (Cr)	0.35	0.40- 0.65			
Vanadium (V)	0.023	0.018- 0.065			
Molybdenum (Mo)	0.029	0.020- 0.050			
Boron (B)	0.29	0.25- 1.5			
Iodine (I)	0.29	0.25- 1.8			
Lithium (Li)	< 0.004	0.007- 0.020			
Phosphorus (P)	132	150- 220			
Selenium (Se)	4.6	0.55- 1.1			
Strontium (Sr)	0.65	0.50- 7.6			
Sulfur (S)	49100	44000- 50000			
Cobalt (Co)	0.011	0.005- 0.040			
Iron (Fe)	5.9	7.0- 16			
Germanium (Ge)	0.033	0.030- 0.040			
Rubidium (Rb)	0.004	0.007- 0.096			
Zirconium (Zr)	0.15	0.020- 0.42			

SPECIMEN DATA		RATIOS		
COMMENTS:		ELEMENTS	RATIOS	RANGE
Date Collected: 06/10/2013	Sample Size: 0.199 g	Ca/Mg	2.39	4- 30
Date Received: 06/14/2013	Sample Type: Head	Ca/P	3.26	1- 12
Date Completed: 06/15/2013	Hair Color: Brown	Na/K	3.33	0.5- 10
Methodology: ICP/MS	Treatment:	Zn/Cu	14.6	4- 20
	Shampoo: Fructis	Zn/Cd	> 999	> 800

TOXIC METALS					
	RESULT µg/g creat	REFERENCE INTERVAL	WITHIN REFERENCE		OUTSIDE REFERENCE
Aluminum (Al)	160	< 35			
Antimony (Sb)	0.3	< 0.2			
Arsenic (As)	21	< 80			
Barium (Ba)	4.2	< 7			
Beryllium (Be)	< dl	< 1			
Bismuth (Bi)	1.1	< 4			
Cadmium (Cd)	2.9	< 1			
Cesium (Cs)	4	< 10			
Gadolinium (Gd)	6.4	< 0.8			
Lead (Pb)	9.8	< 2			
Mercury (Hg)	2.1	< 4			
Nickel (Ni)	16	< 10			
Palladium (Pd)	< dl	< 0.15			
Platinum (Pt)	< dl	< 0.1			
Tellurium (Te)	< dl	< 0.5			
Thallium (Tl)	0.2	< 0.5			
Thorium (Th)	< dl	< 0.03			
Tin (Sn)	9.7	< 5			
Tungsten (W)	1.3	< 0.4			
Uranium (U)	0.2	< 0.04			

URINE CREATININE					
	RESULT mg/dL	REFERENCE INTERVAL	-2SD -1SD MEAN +1SD +2SD		
Creatinine	45.9	40 - 225			

SPECIMEN DATA			
Comments:	Results checked.		
Date Collected:	12/03/2013	pH upon receipt:	Acceptable
Date Received:	12/11/2013	<dl:	less than detection limit
Date Completed:	12/19/2013	Provoking Agent:	DMPS, EDTA
Method:	ICP-MS	Creatinine by	Jaffe Method
		Collection Period:	timed: 6 hours
		Volume:	950 ml
		Provocation:	POST PROVOCATIVE
Results are creatinine corrected to account for urine dilution variations. Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions. Chelation (provocation) agents can increase urinary excretion of metals/elements.			

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TESTS	RESULT	FLAG	UNITS	REFERENCE INTERVAL	LAB
T4,Free(Direct)	1.19		ng/dL	0.82-1.77	01
TSH	6.540	HIGH	uIU/mL	0.450-4.500	01
Reverse T3, Serum	11.4		ng/dL	9.2-24.1	02
Thyroid Peroxidase (TPO) Ab	5		IU/mL	0-34	01
Antithyroglobulin Ab	<20		IU/mL	0-40	01
Siemens (DPC) ICMA Methodology					
Triiodothyronine,Free,Serum	3.7		pg/mL	2.0-4.4	01



0060 Porphyrins Profile - Urine

Methodology: UPLC/Fluorescence detection, Colorimetry

Ranges are for ages 13 and over

Compound Tested	Results nmol/g creatinine	Quintile Ranking					95% Reference Range
		1st	2nd	3rd	4th	5th	
Porphyrin Pathway Intermediates							
1. Uroporphyrin I & III	9.4						<= 27.2
2. Heptacarboxyporphyrin	4						<= 11.2
3. Hexacarboxyporphyrin	<DL						<= 3.3
4. Pentacarboxyporphyrin	1.5						<= 5.4
5. Precoproporphyrin*	8.5 H						<= 14.8
6. Coproporphyrin I	23						<= 56
7. Coproporphyrin III	63						<= 159
Calculated Values							
8. Total Porphyrins	101						<= 233
9. Precopro/Uro I & III	0.9 H						<= 1.11
10. Copro I/Copro III	0.37						<= 0.87

Creatinine = 48 mg/dL

<DL = less than detection limit

*Precoproporphyrin is an atypical porphyrin associated with mercury toxicity.^{1,2}

1. J.S. Woods, M.A. Bowers, H.A. Davis, Toxicology and Applied Pharmacology 110, 464-476 (1991).

2. D. Echeverria et al.. Neurotoxicology and Teratology 28 (2006) 39-48.

0060 Porphyrins Profile - Urine

Methodology: UPLC/Fluorescence detection, Colorimetry

The following comments pertain to abnormalities found on this report.

Elevation(s) of 1 of the compounds Pentacarboxyprophyrin, Precoproporphyrin and Coproporphyrin III is associated with the toxic effects of mercury. The elevation of the Precoproporphyrin/Uroporphyrin I & III ratio further indicates that the other abnormalities are due to mercury.

Although the Metamatrix profile will reveal disruptions in the heme pathway, the data is not reviewed by a specialist who can make a diagnosis of hereditary porphyrias. Abnormalities may be due to combinations of genetic or physiological factors and environmental exposures. All potential impacts on porphyrin synthesis should be considered when interpreting the results. The comments provided are intended to help alert clinicians to factors that may be relevant according to published studies.

Health history for hair test 794

Thanks for providing this service. I tried to type these into the text template and kept getting numbers mixed up and mistyped. Very frustrating. Appreciate being able to send this pdf to you. Sorry if answers below aren't great. It's difficult for me to remember dates and details.

1) Current symptoms and health history - A lot of depression, fatigue and brain fog since my teens. I've had amalgam fillings since elementary school. Got them out about 3-4 years ago. Noticed at the time - didn't think of it having to do with fillings - that after I got them out I felt great for a little while and my hair got thicker and my nails did too. Then I crashed and nearly dropped college again. Diagnosed as ADD. Have been grinding teeth since I was 13 or so. Broke several and wore a lot of them down very flat, according to dentists. So probably ingested some amalgam with that.

2) Yes my wisdom teeth were removed. Mom fed me formula and I was a premie, so I had a small jaw and a lot of teeth had to come out. Then I got a ton of cavities and fillings. Had braces for years in elementary school and middle school. Think I started them in 1st grade. No root canals. Also mom has had amalgams since she was a kid, and she was nearly 40 when she had me.

3) Currently I have white fillings - wasn't smart enough about toxicity issues to ask what they are made of when I had them replace amalgams. I use a resin sleep apnea device each night - material makes me nervous now but I can't sleep without it.

4) A lot of amalgams, some gold fillings, probably root canal.

5) God so many vaccines. Since I've been so spacey my med records are all over the place and I've been in and out of colleges, so I've redone them several times as an adult. Didn't realize what a bad idea that is. Had all the normal childhood ones. Have had flu shots a few times. Not in a couple years.

6) Occasionally Vitamin D3 and Vitamin C. I don't tend to remember to take supplements and didn't know a lot about them.

7) 28 yo, 5.4", 118 lb

8) I have low-normal free T3 and free T4, but a high TSH. Not sure what that means yet. Wondering what the hair test says about my thyroid and adrenals, specifically. I get very cold.

9) Seattle, WA, USA

p.s. Also I've had weird endocrine symptoms in the past like lactating/prolactinemia without anything showing why, including MRIs.