



NUTRITIONAL LAB
SERVICES

PO BOX 4233
BURWOOD EAST VIC

Lab id : **12345678**

Test Hair

Date of Birth : April 26, 1996

Sex : M

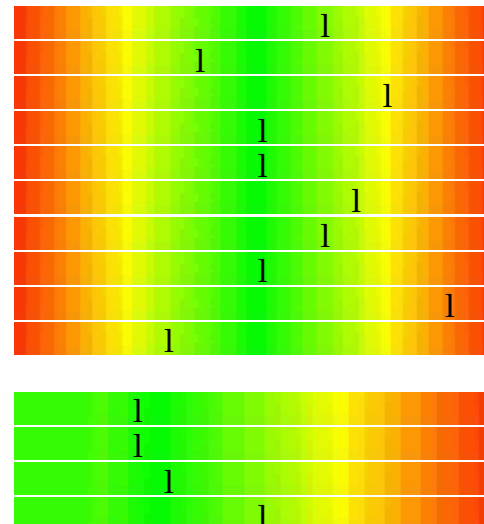
Collected : August 25, 2008

www.nlabs.com.au

Ph: (03) 9803 5335 Fax: (03) 9888 5811

INTEGRATIVE MEDICINE

HAIR	Result	Range	
Hair Mineral Analysis			ppm
Hair Description	Dark Brown		
Calcium (Hair)	2944.96	146.00 - 3190	ppm
Chromium (hair)	0.45	0.13 - 1.00	ppm
Copper (hair)	36.21 *h	11.00 - 34.00	ppm
Iron (Hair)	31.61	5.00 - 44.70	ppm
Magnesium (hair)	89.55	30.00 - 122.0	ppm
Manganese (hair)	0.76 *h	0.25 - 0.75	ppm
Selenium (hair)	1.34	0.48 - 1.45	ppm
Zinc (hair)	333.49	99.00 - 450.0	ppm
Calcium/Magnesium Ratio	32.9 *h	4.9 - 26.1	RATIO
Zinc/Copper Ratio	9.2	8.2 - 13.2	RATIO
Toxic Mineral Levels			ppm
Arsenic (hair)	0.47	0.00 - 3.70	ppm
Cadmium (hair)	0.30	0.00 - 2.70	ppm
Lead (hair)	12.67	0.00 - 51.00	ppm
Mercury (Hair)	4.35	0.00 - 7.60	ppm



(*) Outside reference range.

(h) Above reference range.



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Hair Minerals Analysis Comments

The measured hair analysis results never reveal exactly how much to supplement when a level is abnormal. What we are measuring is the tissue (hair) saturation of each particular mineral.

When nutritionally essential elements are low or deficient, the Reference Daily Intake (RDI) levels provide guidance for supplementation. The RDI's for elements or minerals are the daily intakes recommended for essential body functions.

ELEMENT	RDI**
Calcium	1000 milligrams***
Chromium	120 micrograms
Copper	2 milligrams
Magnesium	400 milligrams
Manganese	2 milligrams
Selenium	70 micrograms
Zinc	15 Milligrams

HIGH Copper (Hair): - Unbound copper is known to be an even more reactive prooxidant than iron, especially in the presence of strong reducing agents such as ascorbate or homocysteine. High levels of copper can induce oxidative damage. Small amounts are required for CuZnSOD and ceruloplasmin.

Toxic levels cause nausea, behaviour problems, vomiting and diarrhoea (250mg CuSO4). Elevated levels of copper often reflect exposure to swimming pool water treated with algacide. Occasionally, elevated copper occurs from hair treatments, perm, dye, or bleach. If these conditions do not apply to your patient, then look for possible sources of copper in the environment that may be causing the elevated level.

HIGH Manganese (Hair) Comment:

Amyotrophic lateral sclerosis correlates with significant higher levels of manganese. Higher levels of manganese have also been associated with violent behaviour.

Toxicity: Rare, by inhalation or mining activities. Poor bone/connective tissue growth. Impaired glucose tolerance and lipid metabolism may occur. Skin dryness, hair changes, allergies, and behavior problems have also been seen.

Manganese - Unbound manganese is known to be a strong prooxidant, especially in the presence of strong reducing agents such as ascorbate or homocysteine. It is toxic at high levels. Small amounts are required for MnSOD.