TRACE ELEMENTS, INC.
4501 Sunbelt Drive · Addison, Tx · 75001 · U.S.A.

LABORATORY NO.:			
PROFILE NO.: 2		SAMPLE TYPE:	SCALP
PATIENT: FERNAND	AGE: 46	SEX: M	METABOLIC TYPE: SLOW 1
REQUESTED BY: UNI KEY HEALTH SYSYTEMS	ACCOUNT NO.:		DATE: 8/15/2012

NUTRITIONAL ELEMENTS

	Ca	Mg	Na	K	Cu	Zn	P	Fe	Mn	Cr	Se	B	Co	Mo	S
	Calcium	Magnesium	Sodium	Potassium	Copper	Zinc	Phosphorus	Iron	Manganese	Chromium	Selenium	Boron	Cobalt	Molybdeum	Sulfur
HIGH	172	20.0	68	46	6.9	32	29	2.7	.250	0.14	0.33	1.80	.005	.013	7126
	135	15.5	52	35	5.4	27	25	2.2	.190	0.11	0.26	1.36	.004	.011	6231
REFERENCE RANGE	97	11.0	36	24	3.9	21	20	1.6	.130	0.08	0.18	0.91	.003	.008	5336
	22	2.0	4	2	0.9	10	11	0.5	.010	0.02	0.03	0.02	.001	.003	3546
LOW						5	7						.000	.001	2651
8/15/2012	108	6.0	4	1	10.2	20	17	1.1	.033	0.04	0.08	1.10	.004	.003	4539
5/16/2012	107	8.5	5	2	8.7	18	16	1.8	.045	0.04	0.08	0.47	.002	.006	4087

TOXIC ELEMENTS

	Sb	U	As	Be	Hg	Cd	Pb	Al
	Antimony	Uranium	Arsenic	Beryllium	Mercury	Cadmium	Lead	Aluminum
HIGH	.025	.0595	.070	.004	0.63	.049	1.1	6.3
	.021	.0510	.060	.003	0.54	.042	0.9	5.4
	.018	.0425	.050	.003	0.45	.035	0.8	4.5
	.014	.0340	.040	.002	0.36	.026	0.6	3.6
	.011	.0255	.030	.002	0.27	.021	0.5	2.7
REFERENCE RANGE	.007	.0170	.020	.001	0.18	.014	0.3	1.8
				<<	<<	<<	<<	
8/15/2012	N/A	.0029	.005	.001	0.01	.001	0.1	0.6
5/16/2012	N/A	.0053	.004	.001	0.01	.001	0.1	0.7

ADDITIONAL ELEMENTS

	Ge	Ba	Bi	Rb	Li	Ni	Pt	Tl	V	Sr	Sn	Ti	W	Zr
	Germanium	Barium	Bismuth	Rubidium	Lithium	Nickel	Platinum	Thallium	Vanadium	Strontium	Tin	Titanium	Tungsten	Zirconium
HIGH	.014	0.39	.059	.0285	.009	.15	.003	.0090	.020	0.74	0.05	0.30	.017	0.14
	.011	0.26	.039	.0190	.006	.10	.002	.0060	.014	0.50	0.03	0.20	.011	0.09
REFERENCE RANGE	.006	0.00	.000	.0000	.001	.00	.000	.0000	.002	0.03	0.00	0.00	.000	0.00
LOW			<<		<<		<<	<<			<<		<<	
8/15/2012	.006	0.08	.002	.0011	.001	.03	.001	.0005	.003	0.84	0.01	0.07	.001	0.02
5/16/2012	.002	0.07	.002	.0025	.007	.04	.001	.0005	.002	1.19	0.02	0.09	.001	0.04

"<<": 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. FNo. 45 D0481787

8/15/2012
CURRENT TEST RESULTS
5/16/2012
PREVIOUS TEST RESULTS

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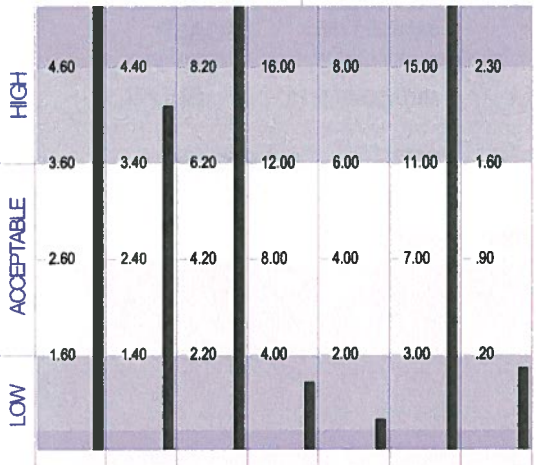
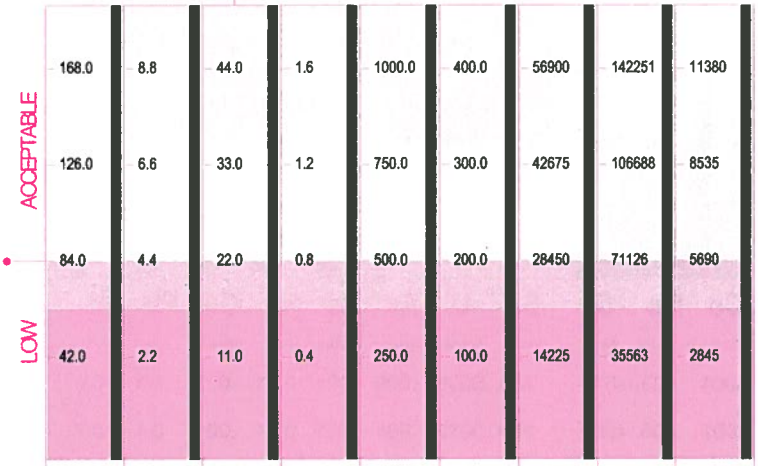
SIGNIFICANT RATIOS



Ca/P	Na/K	Ca/K	Zn/Cu	Na/Mg	Ca/Mg	Fe/Cu
6.35	4.00	108.00	1.96	.67	18.00	.11
6.69	2.50	53.50	2.07	.59	12.59	.21

TOXIC RATIOS



Ca/Pb	Fe/Pb	Fe/Hg	Se/Hg	Zn/Cd	Zn/Hg	S/Hg	S/Cd	S/Pb
1080.0	11.0	110.0	8.0	20000.0	2000.0	453900	453900	0 45390
1070.0	18.0	180.0	8.0	18000.0	1800.0	408700	408700	0 40870

ADDITIONAL RATIOS

RATIO	CALCULATED VALUE		EXPECTED
	Current	Previous	
Ca/Sr	128.57	89.92	131/1
Cr/V	13.33	20.00	13/1
Cu/Mo	3400.00	1450.00	625/1
Fe/Co	275.00	900.00	440/1
K/Co	250.00	1000.00	2000/1
K/Li	1000.00	285.71	2500/1
Mg/B	5.45	18.09	40/1
S/Cu	445.00	469.77	1138/1
Se/Tl	160.00	160.00	37/1
Se/Sn	8.00	4.00	0.67/1
Zn/Sn	2000.00	900.00	167/1

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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.