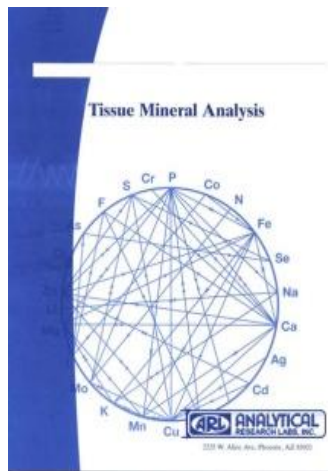




# What Is A Hair Tissue Mineral Analysis? (HTMA)

## Introduction



To the left is a sample of the cover sheet of the Laboratory Report for the Hair Tissue Mineral Analysis, which includes a booklet of educational information, which each of our clients receive when we test a sample of their hair. Many clients ask, **“What is A Hair Tissue Mineral Analysis and what will it tell me about my health?”** Therefore, this article has been written to answer this question. From the educational information provided by our HTMA Lab, Dr. Smith has updated and tailored it specifically for the hair-related services we provide for our clients.

## What Is A Hair Tissue Mineral Analysis?

A hair tissue mineral analysis (HTMA) simply stated, is a screening test that measures the mineral content of your hair. However, a hair tissue mineral analysis is much more than a test for minerals.

As you read this article, you will understand why a Hair Tissue Mineral Analysis is a standard requirement of Dr. Smith’s to assess the cause of any health challenge today. A Hair Tissue Mineral Hair Analysis also provides a scientific evaluation for people suffering with:

- Depression
- Headaches
- Hypoglycemia
- Hyperactivity
- Arthritis
- Hair Loss
- Anemia

- Adrenal/Thyroid Disturbances
- Prostate Disorders
- Digestive Disturbances
- Diabetes
- Musculo-Skeletal Disorders
- Cardio-Vascular Disease
- Skin Rashes

- Emotional Problems
- Mood Swings
- Allergies
- Fatigue
- Lack of Concentration
- Recurrent infections
- Hormone Imbalance



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A Hair Tissue Mineral Analysis can also identify the causes of abnormal changes in body chemistry and physical changes resulting from nutritional deficiencies, such as:

- White spots in fingernails
- Longitudinal ridging in nails
- Brittle hair and nails
- Premature graying
- Deep grooves across nails
- Stretch marks
- Lack of Growth

## Mineral Blueprint

**The Hair Tissue Mineral Analysis (HTMA)** is a laboratory test from a sample of your hair. It provides a mineral blueprint of one's biochemistry. Therefore, a hair tissue mineral analysis can provide pertinent information about your metabolic rate, energy levels, sugar and carbohydrate tolerance, stage of stress, immune system and glandular activity, including the hair.

From your hair test results, Dr. Smith is able to identify factors contributing to a myriad of health challenges including actual challenges in hair growth and color restoration.

## How can a Hair Tissue Mineral Analysis help other areas of the body?

Like a train that transports passengers to their destination, minerals are the transporters of biological substances to the cells. For example, minerals transports your thyroid, adrenal, male and female hormones from the glands to the cells that require these hormones. Minerals also transport insulin and other substances from the pancreas to the cells.

Therefore a deficiency or excessive amount of any one or more mineral can adversely affect the function and health of many areas of the body, as well as adversely affect healthy hair growth.



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## The Role of Minerals In Hormone Balance

From clinical experience analyzing thousands of Hair Tissue Mineral Analysis for clients, Dr. Smith has observed that often symptoms occur not from poor hormonal production, though this can be a factor, but in every case, deficiency in the minerals that transport the hormones is a factor. For example, clients may be diagnosed with low thyroid function (hypothyroid) from a blood test and prescribed a drug, called, Synthroid. In time the chemicals in Synthroid can damage a perfectly healthy thyroid if the real problem was not thyroid dysfunction but mineral deficiency.

Through Dr. Smith's clinical observations in analyzing Hair Tissue Mineral Analysis, she has identified that often the problem was not insufficient thyroid hormone production from a dysfunction thyroid glands, it was a deficiency in the minerals that transport the thyroid hormones being produced.

When the body has hormones or other substances that it cannot be transported to the cells or any other place the hormones or substances needs to go, the hormones or substances then become bio-unavailable. The body is designed to send bio-unavailable substances to the elimination pathways. In other words, to the places in the body where these substances can be moved out of the body – such as the hair, kidneys, bowels, skin. For bio-unavailable hormones, the body will send them to the blood to transport them to the liver. The liver then changes the hormones to a water soluble substance and sends them to the kidneys to be excreted (removed) from the body.

If your physician happens to test your blood at that the time this is occurring, your thyroid blood levels may show what we call a temporary or false high or low level. Correct the mineral deficiencies and retest the blood thyroid hormones after the bio-unavailable hormones have been removed from the blood (since the ultimate destination was the liver), and thyroid blood levels will show normal.

Therefore, taking a medication for any hormone imbalance without first obtaining a hair and saliva test is taking action from an incomplete assessment of the organ/gland function. A saliva test will identify if the cells of the gland or organ are actually producing the hormones sufficiently, hair identifies if the hormones are being transported, whereas, a blood test is not a



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cellular test, like hair or saliva, so all three are required to truly identify hormone function – whether the hormones are thyroid, adrenal, male, female, etc.

## The HTMA Is Essential To Accompany All Other Biochemical Tests

Therefore, a Hair Tissue Mineral Analysis is a very important biochemical test that should accompany any saliva, blood, stool or urine test when assessing the cause of any health challenge you experience. Without insight into your minerals (are they sufficient, deficient, excessive and if so which ones are), you will only have one-half of the information required to determine how to assist your body in healing itself.

## The HTMA Tests Minerals and Heavy Metals

Also, a Hair Tissue Mineral Analysis identifies the heavy metals that interfere in brain function, mineral transport, and are toxic to all biological cells. Therefore, the HTMA will assist Dr. Smith in identifying which metals need to be removed from your cells and tissues.

Our hair tissue mineral analysis screens for the level of 16 individual minerals, 36 mineral ratios and five toxic metals from a sample of your hair. It is a tissue mineral biopsy that is non-invasive, relatively inexpensive and extremely accurate. The Laboratory we utilize to process your hair sample uses only the most advanced and sophisticated instrumentation available today, the Perkin Elmer Elan 9000 ICP Mass Spectrometer to assess mineral levels in parts per million or parts per billion.

A hair tissue mineral analysis is considered a *standard* test, used around the world for the biological monitoring of trace elements and toxic metals in humans and animals species. The same technology is used for soil testing and testing of rock samples to detect mineral levels.

Hair, like all other body tissues, contains minerals that are deposited as the hair grows. Although the hair is dead, the minerals remain as the hair continues to grow out. A sample of hair cut close to the scalp provides information about the mineral activity in the hair that took place over the past three to four months, depending on the rate of hair growth.



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## Why is Our Hair Analysis Unique?

Several factors combine to make our hair tissue mineral analysis the best in the industry! We use one of only two laboratories that do not wash the hair at the laboratory. Washing hair samples at the laboratory has been shown to erratically wash out the water-soluble elements. This creates much less accurate results. In a 2001 study in the Journal of the AMA (Seidel, S. et al., Assessment of Commercial Laboratories Performing Hair Mineral Analysis, JAMA, 285(1) Jan 3:67-72.) the two laboratories that did not wash the hair, of which we were one, showed superb reliability. And, of course, we already mentioned that our Lab uses technologically advanced testing instruments, including the Perkin Elmer Elan 9000 ICP Mass Spectrometer.

Our Lab also provides quality control procedures, using known controls which are tested at the beginning, middle and end of every batch of hair samples to insure the accuracy of the results. Our Lab also automatically retests any reading that is out of a normally expected range, provided sufficient hair is available for a second sample.

You will receive your Laboratory Report, Dr. Smith's Interpretation of your Test Results and Hair Tissue Mineral Analysis Report Booklet that provides additional interpretation and mineral education, which was developed by the late Dr. Paul C. Eck, founder of the Lab we use for hair test processing. This is a 15-20 page report that provides information related to your metabolic rate, energy levels, sugar and carbohydrate tolerance, immune system, autonomic balance, glandular activity and metabolic trends, and other information that can be inferred from the test results.



# What Is A Hair Tissue Mineral Analysis? (HTMA)

## ABOUT THE DR. SMITH

**Dr. Donna Smith** has a Ph.D. in Clinical Nutrition, is a Naturopathic Doctor (N.D.), a Board Certified Clinical Nutritionist (C.C.N.), Certified Dietitian-Nutritionist (C.D.N.), and a Canadian Chartered Herbalist (C.H.).

Dr. Smith is also a Free Lance Nutritional Health Writer and has written over 100 articles for Internet and traditional magazines, such as the **American Chiropractic Magazine, the largest chiropractic magazine in the United States.**

She also writes nutrition and health-related e-books, e.g. "**Fibromyalgia – A Clinical Nutrition Syndrome**" (59 Pages. PDF) and "**Dr. Smith's Hair Color Restoration Program – Anti-Grey Solutions**" (57 Pg. PDF).

She is frequently invited to speak on NBC and ABC local networks, and at clubs, hospitals, universities and corporations on a variety of nutrition and health-related topics, such as, the national groups of scientists and biochemists at the **American Society of Clinical Laboratory Science (ASCLS), International and American Associations of Clinical Nutritionists (IAACN), Stephen F. Austin University, Midwestern State University,** Optimist Clubs, Toastmasters, Business and Professional Women's Club, Women Entrepreneurs, Worksite Wellness, American Heart Association, Parkinson's Group, and St Gobain Corporation, to name a few.

Dr. Smith owns **Advanced Clinical Nutrition (est. 1981)** in Wichita Falls, Texas, where she provides a **Clinical Nutrition Analysis or Interpretation of Laboratory Tests (blood, urine, saliva, stool and hair)** to identify and correct dietary, vitamin and mineral deficiencies adversely affecting the healthy function of the human mind and body.

From the findings of these scientific Laboratory Reports, Dr. Smith designs and dispenses therapeutic, whole food supplements, available only through nutritional health care providers, and a Dietary Plan, which is a list of foods selected for the food chemistry's positive effect on the individual's biochemistry, which is also based on test results.

Dr. Smith's Clinical Nutrition Services are also provided to **Healthcare and Fitness Providers**, who want to offer clinical nutrition services to their patients/clients, yet do not have the time or training to do so.

**Clinical Nutrition Testing, Therapy, and Personalized Dietary and Lifestyle Education Services** are provided by mail, e-mail and telephone consultations. A.C.N. clients save money as there are no in-office appointment fees, gas expense to/from appointments or



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time away from home or work for nutritional services. Lab Kits are mailed to the clients' homes, where they collect the samples and mails them directly to our Labs.

Dr. Smith has over 90% success in helping her clients improve their health, increase energy, balance hormones, improve mental function, strengthen joints, muscle, immune system, restore over-all organ/gland function (including the hair system to restore its natural color), manage weight, prevent/reverse disease and enhance life and/or sports performance. Her clientele encompasses 36 U.S. States and five international countries.

**For more information, to order** a clinical nutrition analysis and laboratory tests, and to contact Dr. Smith, call (940) 761-4045 or e-mail at [Services@AdvancedClinicalNutrition.com](mailto:Services@AdvancedClinicalNutrition.com). Meanwhile, please browse [www.AdvancedClinicalNutrition.com](http://www.AdvancedClinicalNutrition.com) to subscribe to Dr. Smith's FREE Newsletter, read Free Articles by Dr. Smith and view *Dr. Smith's Secrets To Healing* TV shows and slide presentations. You may also view Dr. Smith's TV Shows and videos on [YouTube.com/DrDonnaFSmith](http://YouTube.com/DrDonnaFSmith), post questions on her blog at [DrDonnaSmith.blogspot.com](http://DrDonnaSmith.blogspot.com) and follow her on [Twitter.com/DrDonnaSmith](http://Twitter.com/DrDonnaSmith) and [Facebook.com/DonnaFSmithPhD](http://Facebook.com/DonnaFSmithPhD).

**Disclaimer:** Information is provided for nutritional education purposes only and not for the diagnosis or treatment of any medical condition, disorder or disease. Present laws indicate that the author must advise you to seek medical attention for your disease, if you have one. Choosing to do so, or not, is your constitutional right and you are ultimately the only person who is responsible for any decisions, risks or actions you take regarding the care of your mind and body. This author's intention is to provide health care education from a nutritional biochemical perspective so you are equipped to make an informed decision.