

ABOUT HAIR SAMPLING



NOTICE! Please read these instructions at least three (3) days **BEFORE** the hair sample is taken. Please follow all the instructions provided precisely as written. Though the information enclosed refers to other areas of the body, in addition to head hair, where a specimen sample could be taken, only head hair is to be used, unless prior approval has been obtained from Dr. Smith.

WASHING HAIR — The sample should be taken between **four and twenty hours AFTER washing**. Hair should be dry when it is being sampled. Otherwise, it cannot be weighed correctly. This allows the hair to re-equilibrate after washing. Hair that has not been washed for four or five days is prone to environmental contamination.

Most shampoos, rinses, conditioners, tints, sprays and other hair products don't affect the test for three reasons.

First, most of these products do not contain metals, which is what the hair test also measures. Second, the hair is only 10-15% porous. This means that not very much is absorbed by the hair itself (the scalp is porous and can absorb many chemicals). Finally, most shampoos are only applied for 15-30 seconds, not long enough for much absorption to take place, but please AVOID the following shampoos:

- **Grecian Formula** contains lead and could elevate this reading.
- **Head and Shoulders** shampoo contains zinc and could elevate zinc readings.
- **Selsun Blue** shampoo contains selenium and could elevate this reading.

If you have been using these shampoos, wash your hair daily for three days with a our pure Hair Shampoo and Hair Conditioner. Then, your hair sample can be taken on the fourth day.

SHAMPOO AND CONDITIONER — Then continue using our pure, organic Hair Shampoo and Hair Conditioner, thereafter, for regular use so you no longer expose your hair and scalp to toxic ingredients of other brands. The **FDA** allows manufacturers to label products

“Natural” or “Herbal” even if there is only 10% herbs or whole raw food (natural) ingredients included and the other 90% are chemical preservatives and additives, such as isolated or synthetic vitamins/minerals, metals or other chemicals.

HEAVY SWEATING — Heavy sweating just before sampling can increase sodium and potassium readings. So be sure you are not sweating when washing hair for sample collection.

SWIMMING POOL — Swimming in pools can increase copper and sodium readings. So avoid swimming for 72 hours before taking hair sample and be sure hair has been wash 2-3 times prior to last wash before sampling.

HAIR TREATMENTS — “Home” and “Professional” dye/color products do not alter the test significantly. However, it is best to have washed the hair at least 6 to 8 times after home or professional color treatment before taking hair sample. However, after a salon **permanent or bleach treatment**, ideally it would be best to let the hair grow for 6 to 8 weeks.

HOME SAMPLING

Instructions for actually cutting or shearing the hair to take a sample to send to our Lab are on the back of the **“Order Form” from Analytical Labs** under **“Instructions for Hair Sampling.”**

The accuracy of a mineral analysis depends upon many factors. While the laboratory is responsible for the technical aspects of the test, the results will only be as good as the raw material or sample that is received. For this reason, the more care that is exercised by the person sampling the hair, the better the results will be.

HEAD HAIR VS. PUBIC HAIR — The best tissue for sampling is one that is clean, fast-growing and that grows evenly. Head hair fulfills these requirements better than any other type of hair. The normal values have been established based on head hair samples.

In the event that head hair is not available, pubic hair or other body hair may be used. Accutrace Laboratories has performed comparison testing to determine the differences in the mineral readings between head and pubic hair samples. The study found that:

- The major *ratios* are the same in the pubic and head hair samples.
- However, all of the *levels* tend to be higher in pubic hair.

The difference may be due to the slower growth rate of pubic hair and that it is more protected from the elements than head hair. We ask that you do not mix sources, such as half head hair and half pubic hair. This will cause inaccurate readings.

Reminder: Only Head Hair is used, unless prior approval has been obtained by Dr. Smith.

USING OTHER BODY HAIR — Hair from a beard, other body hair or finger nails could be analyzed, but the laboratory has not performed extensive testing on these. Hair shaved off by an electric shaver is definitely not acceptable. Particles of metal from the blades become mixed with the hair.

Quantity — Be sure to sample enough hair. The paper scale should tip to the other side. One of the most frequent problems occurs when too little hair is sent (less than 500 mg). Either the client must be contacted to send more hair, or the sample must be diluted, which reduces the accuracy. The latter, however, is not an option acceptable to Dr. Smith. Also, the laboratory normally keeps some hair to re-run any mineral that falls outside a reasonable range. If the sample is too small, extra hair cannot be saved.

Scissors — Your scissors should be clean and sharp. Steel scissors are better than aluminum scissors. Cutting hair will dull scissors, which must be sharpened or

replaced when this occurs. If plated scissors are used, be sure the plating is not peeling off, which could contaminate the sample.

Short hair — Short hair can be a challenge. Thinning shears are often helpful. Thinning will allow a more even sampling without leaving any 'holes' in your hair. Thinning shears are best when the hair is less than 1 1/2" long. One method is to make a cut with the thinning shears, then pull the scissors away from the head, holding them parallel to the head. The cut hair will come away in the scissors and can be scraped into the envelope, then poured on to scale for weighing.

Retest Samples — When a re-test is necessary, the sample should be taken from the same area as the original sample, if at all possible. This assures continuity from sample to sample. However, it is not necessary to find the precise strands of hair for the next retest. Simply take the sample from the same general area. Also, head hair cannot be compared to pubic hair, so be sure that the second hair sample is from the same origin as the first sample.

Animal Samples — Before sending in a sample for an animal tissue mineral hair testing, please call **Advanced Clinical Nutrition** for specific instructions.

Reference: Eck Institute of Applied Nutrition and Bioenergetics, Ltd.



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