

Research Initiative: Laser Particle Size Analysis of Eniva Mineral Nutraceuticals

2006

## To Whom It May Concern:

Eniva Nutraceutics takes great pride and care in the formulation and manufacturing of its Nutraceutical products. We are dedicated to producing products that are safe, quality-driven, and effective. To do so, we subject our products and the product development process to serious review and rigorous testing.

This writing explains the rational in testing the particle size of Eniva Mineral Nutraceutical components found within several Eniva products.

Nutrient size is a key factor of success for the body to use nutrients for metabolism, playing a determining factor in both absorption and bio-availability.

In this investigation, representative samples of finished product, liquid-mineral Eniva products were selected: Selenium (250 mg / 5 ml); Chromium (120 mcg / 5 ml) and VanChroZn (Vn: 600 mcg/ 5 ml; Cr: 500 mcg / tsp; Zn: 400 mcg / tsp). These samples represent both single and combination mineral solutions produced by Eniva Nutraceutics. These samples were subject to analysis by a *Malvern PCS Dynamic Light Scattering* laser instrument.

The mineral solutions used had no other agents present to avoiding confounding variables during analysis. For example, natural extracts or flavoring agents may contain natural particulate matter which can impede accurate analysis- resulting in an inaccurate average particle size since these substances are often larger than 1 micron.

The detection limit of the laser used was 0.001 micron, representing sub-micron detection. For comparison, the average red blood cell is 3-5 microns in size, approximately 3,000 times larger than the detection limit of the laser used.

Initial testing Result: No particles were detected within the 0.001 to 1 micron size range detection limit

Samples were concentrated through evaporation at 90°C for 8 hours, reanalyzed, and again, no particles were detected.

Based on these results, there are no particles in the 1nm to 1000 nm (0.001 - 1 micron) size range in any of the samples.

These test results demonstrate the sub-micron characteristic of the Eniva's mineral ingredients after they have undergone proprietary technologies used in many of Eniva's Nutraceutical Products. The actual summary letter from the testing lab is enclosed.

Sincerely,

Eniva Research Group

## AVEKA, Inc.

## PARTICLE PROCESSING & CUSTOM RESEARCH

June 14, 2006

Eniva Corporation 9702 Ulysses St. NE Blaine, MN 55449

Dear Eniva Research Group:

Aveka Characterization Lab received three samples (Van Chro Zin, Selenium, and Chromium dietary supplements) on January 16, 2006 for particle size analysis.

The samples were analyzed using the *Malvern PCS Dynamic Light Scattering* instrument. The PCS analyses samples for particles in the 1nm to 1000 nm (0.001-1 micron) size range.

Results: No particles were detected

Each of the samples was concentrated through evaporation at 90°C for 8 hours, reanalyzed, and again, no particles were detected. Based on these results, there are no particles in the 1nm to 1000 nm (0.001 – 1 micron) size range in any of the samples.

Sincerely,

Aveka Labs