

## **Advanced Fulvic**

### ***Why Advanced Fulvic?***

Coseva's Advanced Fulvic offers an optimal combination of fulvic acid, humic acid, and unique micronutrients. This combination stems from using materials that originate in several natural sources. Other suppliers tend to simply take their material from a single source, which is often high in humic acid and very low on micronutrients. Our product is formulated to give you a balanced amount of all three components – fulvic acid, humic acid, and micronutrients in a single dose.

### ***Unique Micronutrients***

The micronutrients found in Advanced Fulvic come from a humate deposit in Southeastern U.S. which has a unique profile not found in other humate deposits due to its prehistoric compost of both marine life, fresh water, and land composition (*Appendix I*). An extensive analysis of flavonoids, to our knowledge not done by any other fulvic manufacturer on their material, revealed a presence of a variety of antioxidants and related biologically beneficial compounds. *Appendix II* list flavonoids and terpenoids that were found in significant amounts in the material used in Advanced Fulvic and their health benefits.

In addition, Advanced Fulvic contains 18 amino acids and close to 70 trace minerals. Trace minerals are missing in food that has been grown in depleted soils. Soil can become depleted of its rich array of nutrients by large commercial operations that use synthetic fertilizers and pesticides, and by monocropping. Trace minerals and elements are important for all biological functions like improving the oxygen supply to cells and the brain, for the accumulation of essential fatty acids also needed by the brain, for mood and behavior, as well as motor functions, and how we metabolize nutrients.

### ***Rigorous Testing***

Coseva's Advanced Fulvic uses materials that have undergone extensive testing utilizing the latest methods adopted by the industry. The amounts of fulvic and humic acids are determined using Lamar method, an official testing method adopted by the International Humic Substances Society (IHSS) and Association of Official Agricultural Chemists (AOAC). Sources that are still reporting their humic/fulvic acid amounts based on other methodologies, in particular a Colorimetric method, are significantly overestimating the amounts of acid in their materials and are out of touch with the modern scientific advancements. This overestimation has been well documented in the literature.<sup>1</sup>

In addition, our material has undergone an extensive micro-nutrient testing, unparalleled in the industry. While other manufacturers might claim that they have micronutrients, their claims remain unsubstantiated without the actual test data. Here are some of the results that were shared with our Advanced Fulvic material supplier by R&D scientists that tested their material:

I. Test results show that our fulvic material has more than 1000 times the antioxidant power of fruits or vegetables. A standard serving of our fulvic material (equivalent to a serving size of Advanced Fulvic), has the approximate antioxidant equivalence to an 18,800 mg serving of blueberries or 17,300 mg serving of pomegranate.

The antioxidant power was measured by the TEAC method, a common standard used for foods, beverages, and nutritional supplements.

II. The technology of genomic profiling was used on human white blood cells to reveal the changes of RNA expression in cells in response to our material. The results of this testing showed our fulvic material stimulated 791 genes and down-regulated 550 genes – up-regulating the cells’ free-radical scavenging, cell division, DNA replication and DNA repair while suppressing pro-inflammatory responses.

III. A major lab test was performed in 2019 that identified over twenty polyphenols within our fulvic material, like resveratrol and genistein. These molecules are the backbone of plant nutrition and further proof of our material’s organic origin and bioactivity.

IV. Most recently, we received impressive results from a scientist with data that our fulvic material is being used in the area of nano technology concerning leaky-gut syndrome. His research shows that the properties in our fulvic material work together with other molecules to maintain the tight junctures needed to toxins from escaping into the blood.

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<sup>i</sup> R.T. Lamar and K.H. Talbot, *Critical Comparison of Humic Acid Test Methods*, Communications in Soil Science and Plant Analysis, 40: 2309-2322, 2009; R.T. Lamar, D.C. Olk, L. Mayhew, and P.R. Bloom, *A New Standardized Method for Quantification of Humic and Fulvic Acids in Humic Ores and Commercial Products*, Journal of AOAC International, 97(3): 721-730, 2014.