



Understanding the Complexities of Accurate Fulvic Acid Quantification

Fulvic acid and the other humic components are among the least understood materials found in soil, clay, coal and other humic deposits. The confusion surrounding the analysis and misconceptions regarding the most complex molecules found in nature is in part due to the fact that there is no standardized analytical method for quantifying the content of various fulvic acid products. Until Fulvic acid took its place amongst products that have great health sustaining benefits, there has been little need for separating the fulvic acid fraction from the humic acid fraction in humus for labeling requirements, since these products were used only as soil amendments. States such as California and Oregon do not allow the term fulvic acid on soil amendment labeling. These agencies consider fulvic acid and humic acid the same substance since fulvic acid is a type of humic acid.

Further difficulty in testing for fulvic acid content comes from the fact that there are essentially two types of fulvic acid. Fulvic Acid in its most reactive form is known as free form fulvic acid and is not molecularly bound to any other substance. The other form is called a fulvate and is chelated (bound to) minerals, trace minerals or trace elements. Both these forms appear in coal and clay deposits. All this has created an analytical challenge and mass confusion regarding the accurate quantification of the fulvic acid fraction in humic acid.

The problem is that the old soil testing methods do not distinguish between humic or fulvic acid and, often times, include the ash (mineral) weights in the fulvic acid quantification-this is why you will see label claims ranging from 1% to as much as 40%. Since fulvic acid is part of the humic acid fraction one must take into account that testing methods such as the California Method (CDFA) which reports the humic acid fraction and ash content as fulvic acid is a poor quantification method for determining fulvic acid content.

Greater accuracy can be achieved by testing product samples with two completely different methods and then taking the average between the two results. The first method known as Verpleugh and Branifold (V and B) method usually produces the highest testing results for fulvic acid content. It includes fulvic acid bound to minerals as well as free-form fulvic acid, but it also includes the weights of the mineral contained in the fulvates. So, by itself it cannot reveal the true fulvic acid content.

The second method, known as the Modified LG Butler (Vanillin Catechin Conjugate) method, will usually produce the lowest fulvic acid testing results. This method however only measures the free-form fulvic acid, ignoring the fulvic acid bound to minerals (fulvates). By itself it cannot quantify the actual fulvic acid content. But when these two methods are employed and an average of the results are taken, a much more accurate fulvic acid quantification can be derived.

Our supplier has gone to great expense for research and testing resulting in a more accurate fulvic acid quantification than previously possible. Instead of employing methods that report the humic acid and mineral content as fulvic acid content, they have developed a system of testing that we believe results in a fairly accurate quantification of fulvic acid.

Finally: If anyone tells you that they do not test their product for fulvic acid content because there is no standardized method, we humbly suggest you look elsewhere for a fulvic acid supplier. There is no excuse for not supplying consumers with independent laboratory data that shows not only fulvic acid and humic acid content but also reveals oxygen content, hydrogen content, nitrogen content, carbon content, heavy metal content, microbial profile, trace mineral content, mineral content, lack of insecticide residues, amino acid profile and electrical conductivity.