



Ful-Power

not all HUMIC products are equal

created from prehistoric plant material

METHOD MATTERS:

Humic substances are born of earth's slow decay. Our source is estimated to be over 45 million years old. Unwinding this ancient material in a matter of hours is bound to have negative consequences on the end product. In making Ful-Power we do not use manufacturing shortcuts, i.e. using chemicals to quickly unwind overnight, or crude water-leaches, which yield weak products. Instead we mimic the earth's natural processes and take months to unlock these dynamic molecules.

What sets our manufacturing processing apart? Our liquid humic product is made through a fermentation, or biodigestion, where microbes convert insoluble, premium raw humic substances into just the low-molecular-weight (LMW) fraction. The digestive process ensures we have only the LMW fraction, which are molecules small enough to penetrate the leaf and even the mitochondria within a cell. The high-molecular-weight (HMW) fraction is too large to be absorbed and acts mainly as a soil conditioner. Second, the enzymes, (also coenzymes), antioxidants and other delicate substances, which can easily be denatured by chemical reactions and heat evolved when using hydroxides and strong acids, are left in tact. Our process gently unwinds the material in much the same way it was formed in nature. Finally, Carbonyl groups (part of ketones and aldehydes), carboxylic groups, phenols, and complex carbohydrate are also protected. These components can also undergo rearrangement, like intermolecular condensation reactions, in the presence of OH⁻ (bases) and strong H₃O⁺ (acids). This can cause "clumping" of the molecules and reduce the number of open receptor sites that give the LMW fraction much of its CHELATING and free radical scavenging abilities. When these materials are damaged and or rearranged due to inferior processing it decreases the bio-availability of the product. Our product is highly available as we never use chemicals, preservatives, or acids in our manufacturing processes.

SO DOES GEOLOGY...

Many have heard of humic substances referred to as "Leonardite". Technically, Leonardite only comes from the Dakotas where it was discovered by Dr. Leonard. While Leonardite is a humic substance, it's a relatively old humic substance (in comparison to younger formations) that was formed in the presence of salt water and has been highly weatherized. The result is a product that is high in high-molecular-weight (HMW) humic acid, good for soil conditioning, but low in the LMW fraction, or the biological fraction. We have tested sources from all over the world. Our source is superior because it was formed from fresh water deposits where large leafed plants (cycads, euphorbia etc.), high in latex and other beneficial substances, grew during the cretaceous period. Most of the deposits around the world were formed from salt water deposits with grasses (sedge and reeds etc.) during the older carboniferous period. The older material is more closely related to coal and oxidized slack lignite. There are few known deposits that are both formed in fresh water AND that have not been oxidized or weathered (rinsed of the LMW fraction). There is only ONE SOURCE in the US. BioAg uses premium New Mexico humic substances, formed in fresh water, that was encapsulated with 20+ feet of sandstone. Our source material comes from the basin, not from the rim of the formation where it is cracked open and weathered. Even in New Mexico, mines only several miles apart can have different qualities.

DON'T JUDGE A BOOK BY IT'S COVER:

COLOR can be a source of confusion. By definition the LMW fraction is golden in color where HMW fraction is brown to black. Unfortunately there are ways of making a weak product darker and vice versa. Ful-Power is a LMW isolate digested in rain water that was captured near the Oregon Coast. It can vary slightly in color dependent on many factors, but it is typically gold to orange.

KNOWLEDGE AND EXPERIENCE AT YOUR FINGERTIPS:

Owner Dr. Robert Faust, agronomist and bioag specialist, has been studying humates for over 40 years. Ryan Zadow, Biochemist and R&D manager, has been researching them for over 10. Collectively we've tested much of the raw humic substances from across the globe and scoured thousands of research papers. Amazingly, there are still new aspects of humic substances discovered regularly. We continue to keep tabs on the latest research as well as performing our own research here at BioAg.

This sales material is compliant with OR and CA department of agriculture labeling requirements for humic substances, and is intended for customers in these states. For customers located in other states additional materials can be found on our website.



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For more info: www.BioAg.com