**Humate substances – Humic and fulvic acid**

**PHYTO-MINERALS™**

## **Natures Miracle Cure – HUGE medical discovery**

Until recently, most of the world has been kept in the dark about a “**miraculous**” medical discovery that is so safe, powerful and effective that “doctors” spanning the globe have used it for thousands of years with amazing results.

Called the “**missing link**” to optimum health and nutrition by leading scientists, medical studies have shown that this “secret extract” has the ability to change one’s life for the better.

Scientists have discovered this “missing link” in our food chain, and can see that the rapidly increasing degenerative diseases worldwide may be directly related to the absence of this substance in the human diet.

Now, experts know that more than vitamins and minerals are required for optimal health, and these nutritional elements may be equally important.

This breakthrough discovery is supported by little-known and even secret medical research coming from top institutions around the world… medical schools, hospitals, clinics, and pharmaceutical laboratories.

Most of the world doesn’t yet know about this amazing discovery and for some very good reasons:

Scientists didn’t know it existed, couldn’t detect it, and when they finally did identify it, it was so complex that they couldn’t understand it.
Some of the medical institutions doing the research are more interested in making enormous profits from developing synthetic patented drugs, which is why they prefer you not know about this natural alternative.

Pharmaceutical companies have been rushing to patent synthetic versions of this natural substance, and dozens of patents have been approved. Yet Mother Nature has them all beat because they’ll never be able to duplicate her handiwork. This substance is far too complex!
An estimated 80% of pharmaceutical drugs are tiny, isolated synthetic fractions of this WHOLE AND COMPLETE “missing link” from nature.

So what, you may be asking yourself, is this “Miracle Substance?” The answer lies in the Earth’s very own ancient and rich soil deposits more commonly known as Humus. Humus is that organic portion of soil that remains after millions of years of microbial decomposition of plants and vegetation.

What are Humic and Fulvic Acids?

Humate is the purest form of natural organic matter known to man and it is one of the most complex substances on earth. Humate is the generic name for soil humic substances. Humic and Fulvic acid are the chemical properties of humate.

Many millions of years ago the Earth was a true Eden. The vegetation was extremely lush and abundant, as is evidenced by ancient remains that geologists call humic deposits. These plants were super rich with nutrients and minerals because of the high oxygen content of the air. These super plants produced abundant food in massive quantities capable of feeding the dinosaurs for millions of years. Time passed and so did they. They decomposed for millions of years nourishing the earth for future generations creating nature’s most concentrated source of humic acids crucial for everything living on planet earth. The end product is transformed into the world’s most complex and ultra-compact molecules. Even the nucleic acids (RNA and NDA) of the earlier life-forms remain intact. Humic acid, being the larger molecule and fulvic acid, minute in comparison, have very definite roles to play in bringing human kind back to wholeness.

The use of Humate substances dates back to 1000 BC ancient Ayurveda texts of Charkara Samhita and Sushruta Samhita describing the raw substance Shilajit as a **“rejuvenator and a cure for all diseases’’ and endowed with a capability of increasing Longevity** (Acharya, 1962; Sharma and Das 1988; Ghosal etc al; 1995e; Agarwal etc al.,2007).

The usage of such substances has evolved from centuries of knowledge, sharing, careful observation and practical experience gained from using these amazing bio-products of nature as part of Oriental medicine and worldwide medicine for 3000 years in former Soviet union, China, Greece and Persia being used for a plethora of conditions such as bone fractures, dislocations, diseases of the skin, peripheral nervous system damage, as a soothing and anti-inflammatory agent, an antidote to poisons, traumatic injury and arthritis.

Humate substances go by many different names around the world Shilajit, Mumijo, Mumio, pitch. They varying in physiological properties, purity and quality.

In it’s natural form these substances are often contaminated with varied amounts of impurities such as mycotoxins, heavy-metal ions, polymeric quinones, reactive free radicals, microbial toxins and cellular debris. 100% of Shilajit samples were found to contain fungal organisms (Ghosal et al., 1991; Kumar; 1993) How ever no bacterial association could be seen.

Ayurvedic formulations of Shilajit usually in the form of resin often contain other substances other than Humic and fulvic acid with varying degrees of potency and have not gone through stringent testing and purification processes. They can also come from polluted sources such as near radiation zones in Russia and China. Not all Humate substances are of superior quality and ensuring this is vital.

**Phyto-Minerals™** has gone through rigorous testing and purification processes to remove all microbes, fungus organisms, toxic debris and heavy metals Guaranteed insuring that you are getting 99.9% Humic and fulvic acid in its purest medical grade form.

Humic substances may bind or chelate multivalent cations such as magnesium (Mg2+), calcium (Ca2+) & iron (Fe2+). Chelating the elements in ionic forms increases the availability of these cations to animal and human tissues, including plants and microorganisms

Chelation of ions plays a major role of humic acids with respect to interacting within living biological systems. By chelating the elements ions, they facilitate the uptake of these ions by several mechanisms. Chelation prevents their precipitation and also seems to be a direct and positive influence on their bioavailability.

Humic acids’ ability to chelate substances makes them powerful substances for detoxifying tissues of heavy metals, toxins, pesticides and herbicides. In the environment (soils), and all living cells, humic acid bind tightly to heavy metals and prevent them from be absorbed into plants, humans and animals thereby keeping those plants clean and animal human life healthy and toxin free.



Model Structure of Fulvic Acid
Molecule
(Stevenson, 1982)



Temple-Northeastern-Birmingham
(TNB) Model Structure of
Humic Acid



Fulvic Acid (and Humic Acid) has a wide spectrum of action.

Exhaustive scientific studies prove its power. Fulvic Acid attracts 3 times its weight in radioisotopes and other heavy metals. Fulvic Acid alters the ionic form of toxins into non toxic elements. It turns toxins into good nutrients to be used by your body. Fulvic Acid enters the cell wall of the mitochondria and tells the cell to make more ATP, your energy. The ATP energy increases a positive charge and your life force returns, cells regenerate into optimum health.

## **What Is Humic Acid?**



Further decomposition of these ancient remains form our oil and coal deposits. But geologists have found another most unusual strata that are called humic deposits.

They are quite rare and can be found only in certain areas of the world. It is these deposits that are exceedingly rich in our miraculous, little known substance called Humic Acid.

Humic acid, by definition, is a fraction of humic substances composed of a long chain molecule, which is high in molecular weight, dark brown in colour and soluble in an alkaline solution.

Humic acid binds both to pos­i­tive and neg­a­tive charged ions mak­ing it the most pow­er­ful free rad­i­cal scav­enger, nat­ural anti-oxidant. Humic acid is a molecule that raises non spe­cific organ­isms resis­tance and makes avail­able 70 plus phy­tonu­tri­ents and minerals. Again, little is known about this amazing molecular complex but what is known is that Humic acid, depending on the need for balance in whatever situation, can behave as both a donor or acceptor of electrons.

What this means in laymen’s terms is that it will bind to both positive and negatively charged ions making it the most powerful free-radical scavenger and natural anti-oxidant known. Which makes sense, since Humic acid has long been used in various ancient cultures as folk remedies for a wide variety of illnesses.

Humic acid has a special ability to bind to positively charged ions in the human body. It binds to the deposits that form when particles of magnesium, calcium, iron, cadmium or phosphorous dissolve in water because these deposits are positively charged. This purifies the body and helps revitalize natural balance, much as it does in plants.

Not only are scientists studying new ways that Humic acid might be used to help with metal detoxification, they’re also looking at how it might be used to keep high levels of unwanted metals out of the body to begin with. Some scientist believe they may have already found a way to regulate the amount of metal ions that enter certain farm-raised plants. That could mean people would soon consume less unwanted metal in the first place, and that their bodies will be less dependent on purification to expel toxic metals.

## **Some of the benefits of using Humic Acid:**

* 80+ minerals
• Potent Anti viral properties
• Promotes bone regeneration
• Clinically proven anti-inflammatory
• Burns fat and builds muscle
• Immune boosting
• Hormone balancing
• Anti carcinogenic properties
• Protection from harmful chemicals
• Protects against asthma and bronchitis, fibromyalgia, auto immune disorders, diabetes and tuberculosis
• Clinically shown to Block all viruses, including HIV and Herpes viruses

# **The benefits of Humic Acid in great details:**

Boosting The Immune System:

The abundance of these complex sugars allows the body to manufacture glycoproteins that attach to the killer and T cell acting as a modulator or communication link between the cells. This regulates the immune system cells and prevents either T or Killer cells from becoming out of balance.

Along this same line, burn victims and radiation sickness experience immune system responses that attack the body’s dead cells creating unwanted infections.

Humates cause the immune system to recognize its own dead cells thereby reducing infection. Baylor Medical School is currently researching humates both topically applied and internally dosed for burn victims to reduce infections.

Russian scientists are using the same principle for the treatment of radiation sickness. Sodium humate has been found to increase the lifespan of mongrel rats exposed to lethal doses of cobalt radiation.

People take Humic acid for stimulating the immune system and treating the flu(influenza), avian flu, swine flu, and other viral infections.

Anti-Viral Properties:

Humates are effective media additives for the production of antibiotics in the soil. Humic substances have long been known to exhibit anti-viral properties in particular rhinoviruses.

Viral pathogens for which soil-extract materials have been shown to be effective include in particular Coxsackie virus A9 (34), herpes simplex virus type 1 and 2 10 11 21 29 36 37 human immunodeficiency virus (HIV) 22 30 31 38 39, influenza type A and B22 35 38 40, as well as other respiratory tract infections.33 34 35 37 41.

The mechanism whereby humic substances inhibit the cytopathicity (sic) of a number of viruses has been studied in some depth. It is thought that the materials prevent viral replicating by sorbing onto the viral envelope protein and thereby blocking the sorption of viral particles to cell surfaces.

Humic acids have also been employed as veterinary medicine therapy successfully employing peat mull (extracted humic acid) to prevent the transmission of foot and mouth disease in pigs. Humate is a pharmacy that raises non-specific organism resistance. This fact was confirmed by using such models as atoxic anemia, toxic hepatitis, peptic ulcer and hypercholesterolimia.

Detoxifying Properties:

Fulvic acid, a component of humate, is a strong chelator. It is unique in its chelating ability. Life sustaining minerals, when chelated by Fulvic, are placed in a chemical state (phyto-state) such that they are readily absorbed by the cell or organism. Toxic heavy metals are also chelated but placed in a chemical state that is difficult for cellular absorption.

Fulvic acid in the soil acts as a filter for toxic metals. It will grab a toxic metal and immobilize it which prevents it from migrating or chemically reacting.

When crops are grown on soils deficient in fulvic acid, toxic metals can be absorbed by the plant and passed into the food chain. Many of our foods present today are grown under conditions of “worn out” soil. As a result, more toxic metals are being ingested. Fulvic acid has the capability of removing these toxic metals from the body.

Chelation

Some think another benefit of Humic acid may be that it can act as a chelator. Several conditions, or drugs used to treat conditions, may lead to the accumulation of toxic chemicals or heavy metals in the body, which can interfere with proper cellular function. The University of California, San Diego explains that chelators bind these toxins or heavy metals, neutralizing the chemicals and allowing their excretion via the urine. Humic acid may act as a natural chelator, helping remove toxins from your bloodstream and your body. As a result, Humic acid consumption may play a role in supporting chelator therapy, and may help reduce the risk of some diseases that develop from heavy metals in the blood.

Microbial Interaction:

Humates are known to stimulate microbial activity. In soil testing for microbial activity, levels increased 400 to 5000 times with the introduction of humate (300 ppm) into the soil. Humates added to feed rations stimulate the microbial growth and the extent can be quite large depending upon the species, the culture medium, and the environment.

Humic substances have been also known to exhibit anti-microbial properties. Species for which natural humic substances have been shown to be inhibitory include:

C. Albicans
Ent. Cloacac
Prot. Vulgaris
Ps. Aeruginosa
S. typhimurium
St. aureus
St. epidermidis
Str pyogenes12

It seems that within the body, humates stimulate the “good” microbes while suppressing the “bad” microbes. Testing of milk during field trials indicated a large increase of microbes within the milk. This is usually an indication to the dairyman of impending mastitis (breast infection). The opposite actually happened.

Mastitis cases within the milking herd dropped from an average of 3 to 4 cases daily to 4 cases in a month. Additional confirmation of reduction of mastitis was observed in lactating female goats.

Three female goats with severe mastitis were administered doses of humate over a two-week period. At the end of 7 days, swelling of the mammary glands had subsided and the goats were back to normal activity allowing the kids to nurse without discomfort.

Ulcer protective, mainly attributed to a decrease in the volume of gastric secretions as well as acid and peptic output and on increase in mucosa secretion . (Ghosal 1988).

Anti-ulcerogenic and Anti-inflammatory (Goel etc al, 1990).

Antioxidant activity and possess radical scavenger properties (Banattacharya etc al, 1995; Ghosal etc all.,1995).

Decreases rate of oxidation of reduced glutathione content and inhibited the ongoing lipid peroxidation (Tripathi et all.,1996)

Anti-diabetic activity. Doses of 100mg were found to decrease Streptozocin (STZ)- induced hyperglycaemia in rats and also decreased STZ in superoxide dismutase activity in pancreatic islet cells (Bhatt acharya, 1995; Kanikkannan et al., 1995)

Anti-stress activity (Ghosal et al 1989)

Immunomodulatory activity. Increase white blood cells activity in mice, activated splenocytes of tumor bearing animals at early and later stages of tumor growth (Ghosal et al.,1995a).

Reduced the level of 5-hydroxy tryptamine and 5-hydroxy indole acetic acid and increased the level of Dopamine, noradrenaline and their metabolites in rats brain (Bhattacharya and Ghosal, 1992).

Anti-AIDS activity, enables the body to restore white blood cells counts and a result extends the life span of people afflicted with aids (Ghosal, 1990, 1992 a, b, 1998, Bhau mik et al, 1993).

Viral load reducing properties (Ghosal 2000).

\* These are just a few of the health benefits that Humic Acid has been traditionally known for.

**(See Studies conducted with H&F and Applications of Humic and fulvic acid in attachments for furthur health applications).**

# **Using Fulvic Acid – The Benefits Of This Miraculous Substance**

Fulvic acid is rapidly being recognized as one of the key elements in many outstanding health and scientific breakthroughs of the 21st century. More and more scientists and doctors throughout the world are discovering fulvic acid, and are recognizing its extraordinary potential. Interest in the medical community has been escalating rapidly.

Although the majority of research and experimentation that has been done on fulvic acid is in relation to plants, it is important to realize that human beings have been ingesting fulvic acid complexes regularly for over 60 years in supplemental form, and for thousands of years from natural food and plant sources. The new discoveries involving fulvic acid are very similar in nature to the recent important discoveries of valuable phytochemicals in vegetables that have always existed, but were hitherto unknown. fulvic acid has always occurred naturally in organic plants and soils, yet its recent discovery and tremendous value is now just beginning to be recognized.

Accumulating testimonials from regular users continue to substantiate the fact that the same beneficial properties related to plant studies and cells, hold true in relation to animals and humans as well. Clinical studies on animals and humans are beginnings, and updated information will be forthcoming. Preliminary findings show that the most prominent diseases and health problems of our day have been dramatically effected in positive ways by supplementation or treatment with fulvic acid and other preparations enhanced, extracted, or chelated using fulvic acid.

Uses beneficial to humans are not the only focus here either. The known agricultural benefits have enormous potential to heal soils of the world. Yet the majority of the agricultural community is virtually unaware of the implications. Industrial use for treatment of sewage and landfill wasted, neutralization of radioactive and toxic wastes, water purification and a myriad of other uses are just beginnings to be realized. Both Fulvic and Humic acid have already been found to have tremendous potential.

**What is Fulvic Acid ?**

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Fulvic Acid is a water soluble, natural organic substance of low molecular weight. It is a subclass of Humic Acid, complex mixtures of partially decomposed organic materials, biological compounds created by nature, originally laid down by pristine, ancient forests and compacted and transformed over million of years, extracted for today’s use.

Fulvic acid has been discovered to be one of the most important natural miracles related to life itself. It is an acid created in extremely small amounts by the action of millions of beneficial microbes, working on decaying plant matter in a soil environment with adequate oxygen. Fulvic acid is part of the humic structure in rich composting soil. Fulvic acids contain a vast amount of naturally occuring bio-chemicals, supercharged antioxidants, free-radical scavengers, super oxide dismutases (“SOD”), nutrients, enzymes, hormones, amino acids, natural antibiotics, natural antivirals, and natural fungicides. It is of low molecular weight and is biologically very active. Because of its low molecular weight, it has the necessity and ability to readily bond minerals and elements into its molecular structure causing them to dissolve and become mobilized fulvic complexes. Fulvic acid from humic (or humate) deposits usually carries 60 or more minerals and trace elements dissolved into its molecular complexes. These are then in ideal natural form to be absorbed and interact with living cells. Plants roots and cells readily absorb high amounts of fulvic acid, and maintain it in their structure. In fact it has been discovered that these fulvic acid complexes are absolutely essential for plants to be healthy.

# **The Benefits Of Using Fulvic Acid**

**Promotes Electrochemical Balance As Donor Or Receptor:**

Fulvic acid is available at times as an electron donor and at other times as an electron acceptor, based on the cell’s requirements for balance. One of the reactions that occurs is always an oxidation reaction in which the chemical species loses electrons as a donor. The other reaction is a reduction in which the active species gains electrons as an acceptor. A recent study of the binding of a donor molecule to fulvic acid in solution revealed direct evidence for donor-acceptor charge-transfer mechanisms. Trace minerals in the fulvic acid electrolyte could also be beneficial in this process by serving as electrodes.

**One Of The Most Powerful Natural Free Radical Scavengers & Antioxidants Known:**

Free radicals of fulvic acid behave as electron donors or acceptors, depending upon the need for balance in the situation. Fulvic acid can in the same way take part in oxidation-reduction reactions with transition metals.

**Complexes & Dissolves Minerals & Trace Elements:**

Fulvic acid is especially active in dissolving minerals and metals when in solution with water. The metallic minerals simply dissolve into ionic form, and disappear into the fulvic structure becoming bio-chemically reactive and mobile. The fulvic acid actually transforms these minerals and metals into elaborate fulvic acid molecular complexes that have vastly different characteristics from their previous metallic mineral form. Fulvic acid is nature’s way of “chelating” metallic minerals, turning them into readily absorbable bio-available forms. Fulvic acid also has the unique ability to weather and dissolve silica that it comes into contact with.

**Enhances Nutrients:**

Fulvic acid enhances the availability of nutrients and makes them more readily absorbable. It also allows minerals to regenerate and prolongs the residence time of essential nutrients. It prepares nutrients to react with cells. It allows nutrients to inter-react with one another, breaking them down into the simplest ionic/colloidal forms when in an aqueous solution, enhancing chemical and physical reactions within the body.

**Stimulates Metabolism:**

Fulvic acid appears to cause the genetic mechanism of plants to function at a higher level. It has been concluded that any means by which plant cells are exposed to fulvic acid can improve growth. Oxygen is absorbed more intensely in the presence of fulvic acids. Fulvic acid aids in penetrating roots and then quickly transports to the shoots of plants. Fulvic acid relieves oxygen deficiency and increases the vital activity of cells. Fulvic acids change the pattern of the metabolism of carbohydrates, resulting in an accumulation of soluble sugars. These soluble sugars increase the pressure of osmosis inside the cell wall and enable plants to withstand wilting. Fulvic acid enhances growth and may stimulate the immune system**.**

**Detoxifies Pollutants:**

An important aspect of humic substances is related to their sorptive interaction with environmental chemicals, either before or after they reach concentrations toxic to living organisms. The toxic herbicide known as “Paraquat” is rapidly detoxified by humic substances (fulvic acids). Fulvic acids have a special function with respect to the demise of organic compounds applied to soil as pesticides. It has been established that fulvic acid is vital in helping to form new species of metal ions, binding with organic pollutants such as pesticides and herbicides, and catalyzing the breakdown of toxic pollutants. Radioactive substances react rapidly with fulvic acid, and only a brief time is required for equilibrium to be reached. All radioactive elements are capable of reacting with fulvic acid and thus forming organo-metal complexes of different adsorptive stability and solubility.

**Summary of Benefits**

Some scientists have recently been studying fulvic acid, and have come up some amazing facts. They tell us that fulvic acid is one of the finest natural electrolytes known to man. It helps with human enzyme production, hormone structures, and is necessary for the utilization of vitamins. It has been found to be essential to living cells in carrying on metabolic process. It maintains the ideal environment for dissolved mineral complexes, elements, and cells to bio-react electrically with one another causing electron transfer, catalytic reactions, and transmutations into new minerals. It is also one of the most powerful natural antioxidants and free radical scavengers known. It has the unique ability to react with both negatively and positively charged unpaired electrons and render free radicals harmless. It can either alter them into new useable compounds or eliminate them as waste. Fulvic acid can similarly scavenge heavy metals and detoxify pollutants. Fulvic acid helps to correct cell imbalances.

## **In General, Fulvic Acid Has The Following Benefits:**

* Powerful anti-oxidant and free radical scavenger
* Anti-aging and rejuvenating
* Chelates heavy metals
* Removes radiation from your body
* Repairs RNA and DNA/regrows brain cells
* Transports nutrients into cells
* Powerful natural electrolyte
* Increases bio availability of nutrients and minerals
* Alkalizes and detoxifies blood
* Regenerates and hydrates cells
* Prevents cell mutation
* Prevents mitochondrial damage

Together these miracle molecules Humic and Fulvic acid have a synergistic effect, one aiding the other to optimise, rejuvenate repair and balance every cell in the body right down to the mitochondria of the cell, to support and strengthen life itself. providing all living cells a unique 100% raw and natural plant based form of all the vital elements needed to sustain and optimise our health and wellness on so many levels in one easy to use product.

**Our product : Phyto-Minerals™**

**Bio Mineral Balance’s Phyto-Minerals**™ **Humic and Fulvic acid**  is derived from Humate deposits located in the wilderness Fruitland Formation of North America, **well known to be among the finest Humic deposits in the world because of the very high Humic and Fulvic content, its purity, and favourable mineral and element profile.** Phyto-Minerals™ Humic and Fulvic acid powder (black in colour) can be used in it’s powder form or used for liquid product manufacturing.

Our black Humic Fulvic acid powder contains **25% analysed fulvic acid** and **56% analysed humic acid** and provides a convenient way of delivering very active fulvic and humic acids capsules and tablets, creating solutions of much higher concentrations of Fulvic and humic acids or to make your own Black water or medical grade product for use with chronic health conditions.

A unique source of bio-available 100% organic trace minerals far superior than the common in-organic mineral forms.

Fulvic and humic acid has been employed successfully to produce amazing results within medical, health, farming, environmental health, Professional sports and food and beverages industry’s.

Suitable to use with all living beings with no known or recorded toxicity issues or adverse reactions.

 New research from India suggests that formulating fulvic and/or humic acid with Aspirin enhances it’s stability and absorption. In their book entitled, “Humic Substances in Drug Development”, Dr. Rajesh Khanna, Dr. S. P. Agarwal and Dr. R. K. Khar (Eds.) outlined the use of fulvic and humic acid acids in various drug formulations to enhance their stability, absorption and utilization in the body.

 Phyto-Minerals™ Humic and Fulvic acid powder is a unique 100% naturally formed powder supplement  infused with Fulvic and Humic minerals as well as SBO (Soil Based Organism) probiotics, both USDA Organic Certified and Halal and Kosher approved . Phyto-Minerals™ Humic and Fulvic acid has a pH of 10.

Phyto-Minerals ™Humic & Fulvic minerals are created in highly concentrated form so that they can be utilised in liquid or powder form.

**Mother Nature's own nutrient activation and delivery system to the Cell.**

**Here's a glimpse of our Product Quality Benchmarks:**

The production facility that produces Humic and Fulvic is led by a PhD in Health Sciences.

Who is also a member of the International Humic Substances Society (IHSS), Humic Products Trade Association (HPTA) and actively involved with humic and fulvic acid research in biological systems.

Bio Mineral Balance’s Phyto-Minerals™ Humic and Fulvic exceeds the benchmarks that define a superior quality Humic and Fulvic Nutritional Health Product

that delivers high Humic and Fulvic concentrations, pH, and ORP standards;
GMP production processes and laboratory facility;

Full certificate of analysis
Technical expertise of staff;

Highest quality raw materials;
Devoted to customer service and delivering high quality products at affordable prices.

Retail, Bulk and wholesale orders fulfilled .

## **HIGH QUALITY RAW MATERIALS MAKE HIGH QUALITY PRODUCTS**

**Bio Mineral Balance’s Phyto-Minerals**™ **Humic and Fulvic acid delivers very high, biologically active concentrations.**

Raw Materials are tested 100% of the time for identity and purity before they approved to be used to manufacture nutritional products.  All batches undergo **microbiological testing to assure quality of finished materials.** Quality control processes and environmental controls ensure products are delivered with stated potency and purity**. can be supplemented the paradigm of how nutrients can be supplemented.**

GTX's Fulvic minerals are created in highly concentrated form so that they can be supplemented in liquid or powder form.Bottom of Form

* USDA Certified Organic Ingredients.
* Halal and Kosher approved
* 77+ Trace Minerals. Fulvic / Humic Minerals and SBO Pre and Probiotics
* 18 Amino Acids
* Electrolytes and pH of 10
* GMO Free, Gluten Free, Dairy Free, Vegan
* No Artificial Flavors, Colors, or Preservatives
* No need for refrigeration. Comes with measuring spoon. Add it to your favorite drink! (Water, tea, juice, coffee)

You should also avoid using ordinary tap water when taking Humic and Fulvic Acid as it will dangerously react with halogens, such as chlorine. Rather opt for reverse osmosis or steam distilled water which will not react with Humic and Fulvic Acid.

**When taking Phyto-Minerals™** you may notice a slight dip in your immune system after 2-3 days of usage. This is completely normal and a sign your body is cleansing itself, this is called the **Herxheimer reaction** and is a short term **reaction** to endotoxin-like products released by the death of harmful microorganisms within the body during detoxification.

Some reactions may be worse than others depending on level of toxicity, symptoms noticed may be aching of joints or cold or flu like symptoms. This should dissipate within 1 week of usage.

**Results may vary from person to person. All material provided on this website is meant for educational purposes only. It should not substitute for a medical consultation and there’s no guarantee of specific results from taking Phyto-Minerals™** **humic and fulvic acid.**

 **Other References:**

* [**https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1365-2389.1983.tb01052.x**](https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1365-2389.1983.tb01052.x)
* [**https://www.researchgate.net/profile/Jawahar\_Lal/publication/225075984\_The\_core\_structure\_of\_Shilajit\_humus/links/0a85e53476c48ec8f4000000.pdf**](https://www.researchgate.net/profile/Jawahar_Lal/publication/225075984_The_core_structure_of_Shilajit_humus/links/0a85e53476c48ec8f4000000.pdf)
* [**https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3173016/**](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3173016/)
* [**https://link.springer.com/chapter/10.1007/978-1-4939-0897-4\_10**](https://link.springer.com/chapter/10.1007/978-1-4939-0897-4_10)
* [**https://www.sciencedirect.com/science/article/pii/S0045653509001787**](https://www.sciencedirect.com/science/article/pii/S0045653509001787)
* [**http://www.nrcresearchpress.com/doi/abs/10.4141/cjss74-055#.WyA2-i1g2EI**](http://www.nrcresearchpress.com/doi/abs/10.4141/cjss74-055#.WyA2-i1g2EI)
* [**https://akademiai.com/doi/abs/10.1007/BF02349138**](https://akademiai.com/doi/abs/10.1007/BF02349138)
* [**https://link.springer.com/article/10.1007/BF00452964**](https://link.springer.com/article/10.1007/BF00452964)
* [**https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3758058/**](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3758058/)
* [**https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4691117/**](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4691117/)
* [**http://www.lifeextension.com/Magazine/2009/SS/Coenzyme-Q10-Technology/Page-01**](http://www.lifeextension.com/Magazine/2009/SS/Coenzyme-Q10-Technology/Page-01)
* [**https://febs.onlinelibrary.wiley.com/doi/full/10.1016/S0014-5793%2801%2902199-8**](https://febs.onlinelibrary.wiley.com/doi/full/10.1016/S0014-5793%2801%2902199-8)
* [**https://www.ncbi.nlm.nih.gov/pubmed/26406424**](https://www.ncbi.nlm.nih.gov/pubmed/26406424)
* [**https://www.ncbi.nlm.nih.gov/pubmed/11365013**](https://www.ncbi.nlm.nih.gov/pubmed/11365013)
* [**https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3173016/**](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3173016/)
* [**https://www.ncbi.nlm.nih.gov/pubmed/12593947**](https://www.ncbi.nlm.nih.gov/pubmed/12593947)
* [**https://www.ncbi.nlm.nih.gov/pubmed/15641683**](https://www.ncbi.nlm.nih.gov/pubmed/15641683)
* [**https://www.ncbi.nlm.nih.gov/pubmed/9022289**](https://www.ncbi.nlm.nih.gov/pubmed/9022289)
* [**https://www.ncbi.nlm.nih.gov/pubmed/21785188**](https://www.ncbi.nlm.nih.gov/pubmed/21785188)
* [**https://pubs.acs.org/doi/pdf/10.1021/es00108a003**](https://pubs.acs.org/doi/pdf/10.1021/es00108a003)
* [**https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6151376/**](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6151376/)

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