

# Hydroponic Nutrients, Are they Unnatural ?

In today's world, things seem to have started to shift towards a more "natural" look at things. People are starting to reject synthetic and "artificial" things in favor of the more "natural" and "earthy". Well, as a scientist, I have to say that most people have some very bad misconceptions about these definitions and their "evilness" or "goodness". Let us start from the beginning.

## **What is Natural ?**

This is usually defined as something that comes from nature without any fundamental modification caused by humans. Therefore, you could say that blood is natural, algae oil is natural, bones are natural, etc.

## **What is Unnatural ?**

Something unnatural can be defined as not coming or not belonging in nature. You could then say that a bee swimming is unnatural or that a plant growing inside a PVC pipe is unnatural.

## **What is synthetic ?**

Something synthetic can be defined as chemically manufactured by humans from chemically different materials. For example, plastics are synthetic, pure sodium is synthetic, carbon nano tubes are synthetic, etc. Now see that this definition is not exclusive, something can be synthetic but present in nature, like synthetic hormones, synthetic vitamins, etc.

## **Now which is bad and which is good ?**

This is where most people have it wrong. Natural things are good ? Well, that depends, which natural thing. You eat an orange and it's good, you swallow a scorpion and it's bad. Both

things are natural. Nature produces things that are toxic and lethal, but nature also produces things that are good for you. You cannot judge something to be good just because it belongs inside a group, every category has both good and bad things.

Are unnatural things bad ? That depends. You smell a neurotoxin, you are dead, you use a sulfonamide antibiotic when you have an infection and you are cured. It all depends on the specific thing you are talking about and the specific use you are giving it. There is no sense in judging something as being good or bad for the sake of it.

**Now, are hydroponic nutrients unnatural ?**

No ! Hydroponic nutrients have the exact same chemical form nutrients have in soil. Plants cannot absorb these nutrients if they don't have these specific forms so hydroponic nutrients are indeed natural. They are the exact same molecules that are found in soil. Hydroponic gardening is just a form of manipulation in which plants are given an amount of these nutrients that fits their needs optimally. It differs from their natural conditions in that hydroponic growth conditions are better. The plant gets all its nutrients in the same form it gets them from the soil without needing to break up organic matter to get them or fighting pathological microorganisms. Indeed, hydroponic gardening has both positive and negative qualities, just like everything else !