



## Why AstaZine® Natural Astaxanthin from BGG is the Only Logical Choice

There are several different types of companies supplying Astaxanthin. Leading the way are four established, large scale producers of Natural Astaxanthin extracted from microalgae, each of which belongs to the Natural Algae Astaxanthin Association (NAXA). There is also one large multinational chemical company that is promoting Artificial Astaxanthin synthesized from petrochemicals (which they are trying to claim is “nature identical”). Finally, there is a hodgepodge of new suppliers offering some very questionable products labeled as “Astaxanthin.” So, how can a brand decide which Astaxanthin supplier is best for them?

### **AstaZine® Natural Astaxanthin: The Only Logical Choice**

AstaZine® Natural Astaxanthin is grown in water from the Himalaya Mountains in a pristine environment—a land of abundant sunshine, mild temperatures and otherwise perfect growing conditions for *Haematococcus pluvialis* (the algae from which Astaxanthin is extracted). A proud member of NAXA, BGG grows AstaZine in a state-of-the-art, fully closed system in glass tubes. In these tubes the algae can thrive in the sunshine, yet remain protected from contaminants that invariably infect other growing systems such as foreign algae, protozoa, amoeba and other unwanted organisms and potential toxins.

BGG is currently one of the top two highest capacity producers of Natural Astaxanthin, and with land close to the existing farm earmarked for future expansion, the plan is already in place to become the world’s largest producer by 2020. Brand owners concerned with the horrible supply problems that have plagued the Astaxanthin business since the tremendous increase in publicity over the last five years need not worry about shortages if they buy from BGG—with unsurpassed inventory levels and the ability to expand capacity quickly and efficiently, BGG is the one Astaxanthin supplier that can guarantee supply for years to come regardless of how much the market grows. Some key facts that separate AstaZine® from other Astaxanthin products:

- AstaZine’s purity is unsurpassed. Our “Carotenoid Complex” contains approximately 97% Pure Astaxanthin and only 3% other carotenoids as compared to other brands that have much less Pure Astaxanthin. Since Astaxanthin is what’s providing the health benefits and what you’re paying for, you can’t beat AstaZine for purity, efficacy or value.
- AstaZine® is also the most concentrated source of Astaxanthin. While other suppliers can only attain approximately 1.5% - 5.0% Pure Astaxanthin in their algae biomass, due to advanced technology and proprietary growing methods, BGG’s algae

has the highest potency with levels consistently reaching between 6% and 8% Pure Astaxanthin.

- Independent lab analyses at the world's leading specialist in carotenoids show that AstaZine® raw materials far surpass their stated Astaxanthin content with an average exceeding 10%. This is very important for stability of the finished product as well as for the cost benefit when formulating with a valuable ingredient like Astaxanthin.
- Many other Astaxanthin producers inaccurately inflate their Astaxanthin percentages by claiming "Astaxanthin Complex" as compared to "Pure Astaxanthin." We feel that this is an unethical way to sell a lower potency product at an artificially inflated price. When you choose AstaZine®, you are assured that you're always getting more than the Astaxanthin content stated on our label.
- AstaZine® carries all the most valuable certifications and quality standards including GRAS, ISO 9001-2008, ISO 22000-2005, GMO-Free, Allergen-Free, Vegan, Non-Irradiated, Kosher and Halal. AstaZine® is produced under strict standards conforming to Good Manufacturing Practices (cGMP according to 21 CFR 111).

AstaZine® is produced with the utmost attention to environmental responsibility and sustainability. As a

member of the Organic & Natural Health Association, we are proud that we leave the environment and resources where we grow our algae in the same perfect state as before we started production. We derive a great deal of our energy from sustainable solar power, and the Himalayan water in our algae cultures is run through reverse osmosis to ensure that it is absolutely pure. This results not only in a clean environment, but also in the world's leading purity for our Astaxanthin products.

Lastly and perhaps most importantly, you can't find a company with higher overall quality standards anywhere. BGG is widely recognized as one of the world's highest quality producers of nutraceutical raw materials. Our customers include most of the world's largest supplement brands with the toughest quality standards. And our largest worldwide market is Japan where our products are subjected to a vast array of quality tests far beyond what is customary in most other markets. And we consistently pass this extreme level of testing with flying colors. To summarize, if a product carries the BGG brand, you can be assured it is the top quality in its category.

### Sources of Astaxanthin in Today's Market

As we mentioned above, there are a few different types of Astaxanthin currently, all of which can be broken



**AstaZine® is the end result of BGG's unsurpassed technical expertise and attention to quality: The world's purest and most potent Natural Astaxanthin.**

down into three different categories. Let's briefly look at each of these to understand why AstaZine® is the crystal clear choice.

## Artificial Astaxanthin

Other than sharing the same chemical formula, Natural and Artificial Astaxanthin are completely opposite in every other way. To scientists who really understand Astaxanthin, Artificial Astaxanthin that is synthesized from petrochemicals should not even be allowed to be called "Astaxanthin." Here is a list of the many differences:

- **Strength:** In different university and independent lab experiments, Natural Astaxanthin has consistently proven to be at least 20X stronger than Artificial Astaxanthin as an antioxidant.
- **Shape:** The Natural Astaxanthin molecule's stereochemistry is unique (it is shaped differently than the Artificial Astaxanthin molecule).
- **Esterification:** Natural Astaxanthin is 95% esterified (it has a fatty acid molecule attached to either one or both ends of the Astaxanthin molecule). Artificial Astaxanthin is primarily "free" Astaxanthin and does not have fatty acid molecules attached to it.
- **Synergy:** Natural Astaxanthin from *Haematococcus pluvialis* microalgae comes complexed in nature with small quantities of supporting carotenoids such as lutein, beta-carotene and canthaxanthin present for natural synergy. Artificial Astaxanthin does not contain supporting carotenoids.
- **Source:** Artificial Astaxanthin is synthesized from petrochemicals in an elaborate, multi-step process. Natural Astaxanthin is extracted from natural *Haematococcus pluvialis* microalgae.
- **Safety:** Natural Astaxanthin has an extensive portfolio of human safety studies and a history of over 15 years of safe use as a commercially-sold nutritional supplement. Artificial Astaxanthin has never been directly tested in humans for safety. And while there have never been any safety issues noted in relation to natural carotenoids, there have been serious safety concerns related to the use of synthetic carotenoids in humans.
- **Efficacy:** Artificial Astaxanthin has never been shown to have any health benefit in human clinical research. It's completely untested—no one knows if it will do anything to support or improve people's health. On the other hand, Natural Astaxanthin's

diverse health benefits have been validated in approximately 100 human clinical trials.

- **Dosage:** In the event that Artificial Astaxanthin is ultimately proven safe for long-range human consumption, dosages would logically need to be at least 20 times greater than corresponding dosages of Natural Astaxanthin due to its vastly inferior antioxidant profile. This would put Artificial Astaxanthin out of reach economically for most consumers. (Adapted from the peer-reviewed paper "Synthetic Astaxanthin is significantly inferior to algal-based Astaxanthin as an antioxidant and may not be suitable as a human nutritional supplement." Capelli, B., Bagchi, D., Cysewski, G. *NutraFoods* (2013) 12:145-52.)

## Emerging Suppliers

Over the last few years as Astaxanthin became much more popular, several new suppliers have begun promoting their products. Most of these are inferior products with poor stability or, worse yet, Artificial Astaxanthin that they claim is "Natural." Amazingly, in some cases products being sold as "Astaxanthin" have not had any detectable level of Astaxanthin in them. One of the reasons why this has been possible is that the analytical procedure to test Astaxanthin is extremely difficult to perform accurately. Even excellent independent labs and some government-owned testing facilities have had extreme difficulties in learning to test Astaxanthin properly. The end result is confusion in the marketplace:

*"A survey of fifteen different commercially sold products found that only three had the stated level of Astaxanthin present. This means that 80% of the products were cheating the consumer, and only 20% had the Astaxanthin that their label claims they have! And although some of them only missed their label claim by 5% or 10%, five out of these fifteen products tested had less than half the Astaxanthin that their label stated. These are some very bad odds indeed—80% of the products had less than they should, and 33% had less than half of what they should."*

(From the book: "The World's Best Kept Health Secret: Natural Astaxanthin" (2014). ISBN #0-979-2353-0-6.)

There are countless technical issues that can result in inferior products. For example, one step that is absolutely critical during the manufacturing process is ensuring that the final Astaxanthin raw material is bioavailable. The cell wall of *Haematococcus pluvialis* algae is very hard, and unless a processing step to ensure that the cell walls are cracked occurs, people ingesting the product will not absorb any of the Astaxanthin into their bloodstream. People will be taking an Astaxanthin product that is essentially useless.

Basically, this shows that there are a lot of unresolved problems in the Astaxanthin marketplace, so purchasing Natural Astaxanthin from a reputable supplier who is a member of NAXA is imperative to ensure a quality product that meets label claims and will result in the desired health benefits in people who consume it.

### **Established, Large-Scale Producers of Natural Astaxanthin.**

There are four of these suppliers to choose from, and all of them produce acceptable products. So how can

a brand decide which Astaxanthin product to choose?

- First of all, go with the company with the best inventory levels and with a large capacity that can be quickly and easily expanded whenever necessary. Don't get stuck without supply when the next big wave of positive publicity about Astaxanthin hits. Too many brands were caught in this predicament from 2011 – 2014 and lost all their sales momentum—don't let it happen to you!
- Only one of the four leading Astaxanthin products can be the very best, and AstaZine® wins this hands-down with its combination of the highest potency and purity.
- With aggressive pricing and promotional programs, BGG offers an unparalleled value in AstaZine®. You can have the world's purest and highest potency Astaxanthin for a price that will make even the toughest Director of Purchasing very happy!



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