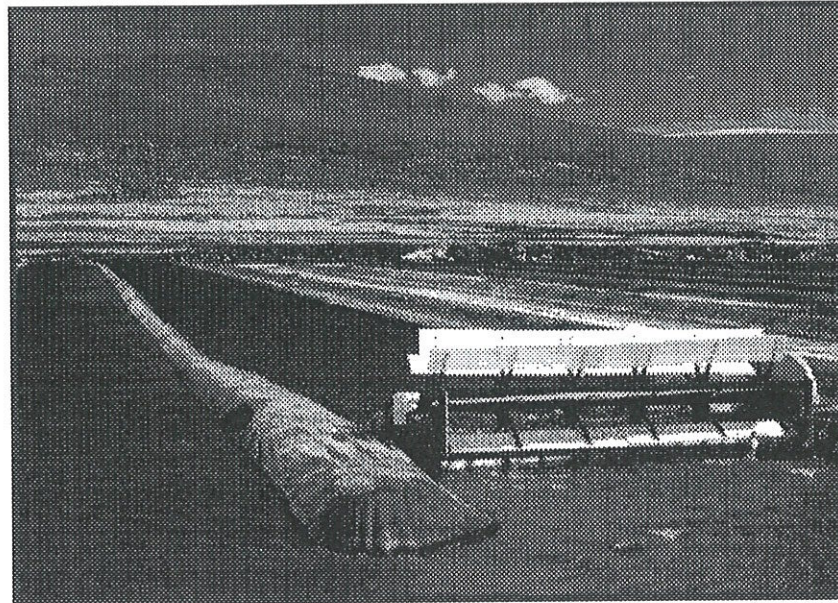


King of the Carotenoids

By Bob Capelli
with Dr. Gerald Cysewski



Natural Astaxanthin concentrated in Haematococcus microalgae

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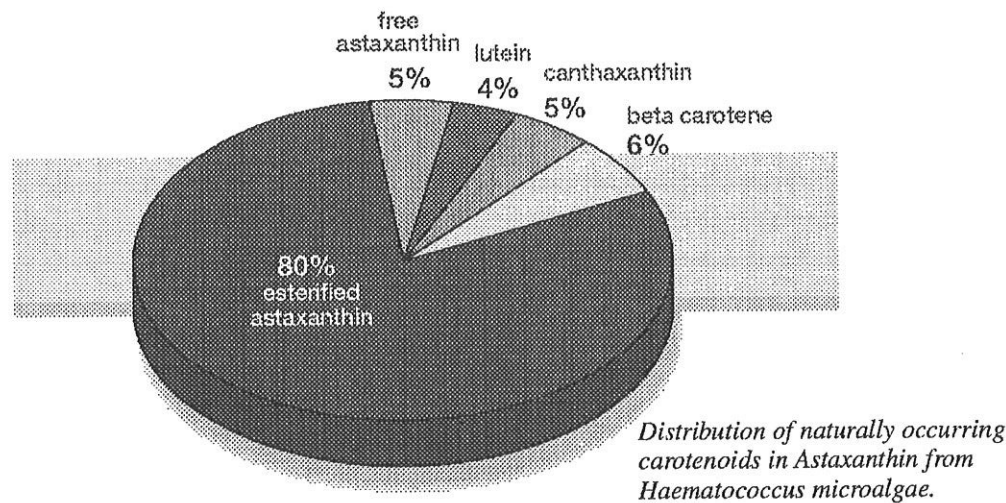


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Haematococcus Pluvialis microalgae. When the microalgae hyperaccumulates Astaxanthin as a survival mechanism due to environmental stress, it also produces small quantities of other supporting carotenoids. The resulting complex is broken down as follows:



The additional carotenoids beta carotene, canthaxanthin and lutein work in synergy to make Natural Astaxanthin a more effective antioxidant than Synthetic Astaxanthin. At the same time, they lead to much more efficacy in treating various health conditions and ensuring Natural Astaxanthin's many health benefits. We'll discuss the difference between Natural Astaxanthin and synthetic Astaxanthin in more detail in Chapter 9.

Antioxidant for the Brain, Eyes and Central Nervous System

Many antioxidants and even carotenoids that are closely related to Natural Astaxanthin cannot cross the blood-brain barrier and get into the brain, the eyes and the central nervous system. Even beta carotene, the most well known of all carotenoids cannot do this. Neither can some other well known carotenoids such

decreased free radical removal ability. Such diseases include age-related macular degeneration (the leading cause of blindness in the United States), retinal arterial and venous occlusion, glaucoma, diabetic retinopathy and injuries resulting from trauma and inflammation. An antioxidant that can reach the inner eye by crossing the blood-brain and blood-retinal barriers would protect the eye from these damaging conditions.

Although Astaxanthin is not normally found in the eye, Dr. Mark Tso was the first to prove that Astaxanthin could cross the blood-brain and blood-retinal barriers by feeding Astaxanthin to rats and finding it in their eyes. He then proved it protected the eye from light-induced damage, photoreceptor cell damage, ganglion cell damage, neuronal damage and inflammatory damage (Tso, et al, 1996). Astaxanthin may be the absolute best protection for the eyes among any supplements, although researchers are just beginning to find out about this now.

Never a “Pro-Oxidant”

There is a potential for some wonderful antioxidants, under certain conditions, to become “pro-oxidants” and actually have a negative effect by causing oxidation in the body. Some of the better-known carotenoid antioxidants that can become pro-oxidants are beta carotene, lycopene and zeaxanthin (Martin, et al, 1999). Even such familiar antioxidants as vitamin C, vitamin E and zinc can become pro-oxidants. This is another important factor separating Astaxanthin from other antioxidants—it never becomes a pro-oxidant (Beutner, et al, 2000). This is one more reason that Astaxanthin is clearly a superior antioxidant to others.

A famous study of beta carotene on smokers was done in Finland in the 1990's. In this study, it was found that smokers who took synthetic beta carotene supplements actually had a higher incidence of cancer than those taking a placebo. The challenge with beta-carotene is that it relies on other antioxidants, specifically vitamin C, to properly protect cells from free radicals. (Try to think of a free radical as a hot potato that needs to be passed from one antioxidant to another until it cools off.)

The people in this study were very heavy smokers (three packs per day)

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