Bioactive natural dyes

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Phycocyanin – blue protein from the sea

Innovative and non-GMO production.

Phycocyanin – an intense blue photosynthetic pigment, which is only found in algae, is approved as a food colorant and is, furthermore, beneficial to health: antioxidant, anti-inflammatory, anti-carcinogenic.

Arthrospira platensis – "Spirulina" & Co.

Phycocyanin is obtained on a large scale from the microalga *Arthrospira platensis* „Spirulina", which belongs to the prokaryotic cyanobacteria („blue-green algae") that have colonized our planet about 3.8 billion years ago and helped to build the oxygen atmosphere as the inventors of oxygenic photosynthesis.

As a rich source of protein – long valued by some indigenous peoples of Africa and America – *Arthrospira platensis* biomass contains all the essential amino acids and is with a protein content of over 60% the most protein-rich food. Phycocyanin extracted from *Arthrospira platensis* has been classified as a „Health Improving Agent" by the World Health Organization (WHO).

Improvement of the production process

Several hundred tons of phycocyanin are already produced worldwide. In Saxony-Anhalt / Germany, work is being done on selecting suitable production strains and establishing cost-effective cultivation and purification processes. Research is being carried out to improve the thermostability of the blue protein, which is instable at temperatures above 45°C. Extremophilic algae from hot springs could become a solution.

Conclusion

Phycocyanin is a healthy natural dye from algae providing the rare blue color for ice cream, yogurt, gummy bears, bread and beer and other food products.

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