



Applications of Crocin

Food

Natural dyes are not only having dyeing property but also having the wide range of medicinal properties. Nowadays, fortunately, there is increasing awareness among people towards natural dyes and dye yielding plants. Due to their non-toxic properties, less side effects, more medicinal values, natural dyes are used in day to-day food products and in pharmaceutical industry.¹

Saffron (the dehydrated red stigmas of the flower of the plant *Crocus sativus L.*), the most valuable medicinal food product, belongs to the Iridaceae family which has been widely used as a coloring and flavoring agent in food products such as noodle, pasta, candy and beverage products. These properties are basically related to its Crocins, Picrocrocin and Safranal contents which have all demonstrated health promoting properties. Carotenoid compounds Crocins and Crocetin are important in antioxidant activity of Saffron extracts.²

Saffron is a natural food coloring belonging to the carotenoid family that ranges from orange to yellow depending on the products acidity.³

It shows good overall performance as a food colorant because it is stable toward light, oxidation, microbiological attack, and changes in PH.⁴

Pure Crocin

¹ NATURAL FOOD COLOURS (pdf) : Surbhi Sharma Mumbai

² Evaluation of antioxidant activities of bioactive compounds and various extracts obtained from saffron (*Crocus sativus L.*):

a review: Somayeh Rahaiee & Sohrab Moini & Maryam Hashemi & Seyed Abbas Shojaosadati

https://www.researchgate.net/publication/261758882_Evaluation_of_antioxidant_activities_of_bioactive_compounds_and_various_extract_obtained_from_saffron_Crocus_sativus_L_a_review [accessed May 24 2018].

³ D.D. Williamson

<https://www.ulprospector.com/en/eu/Food/Detail/11393/355983/Saffron?st=1&sl=61409784&crit=a2V5d29yZDpbc2FmZnJvbiBjcm9jaW5d&ss=2&k=saffron|crocin&t=saffron+crocin>

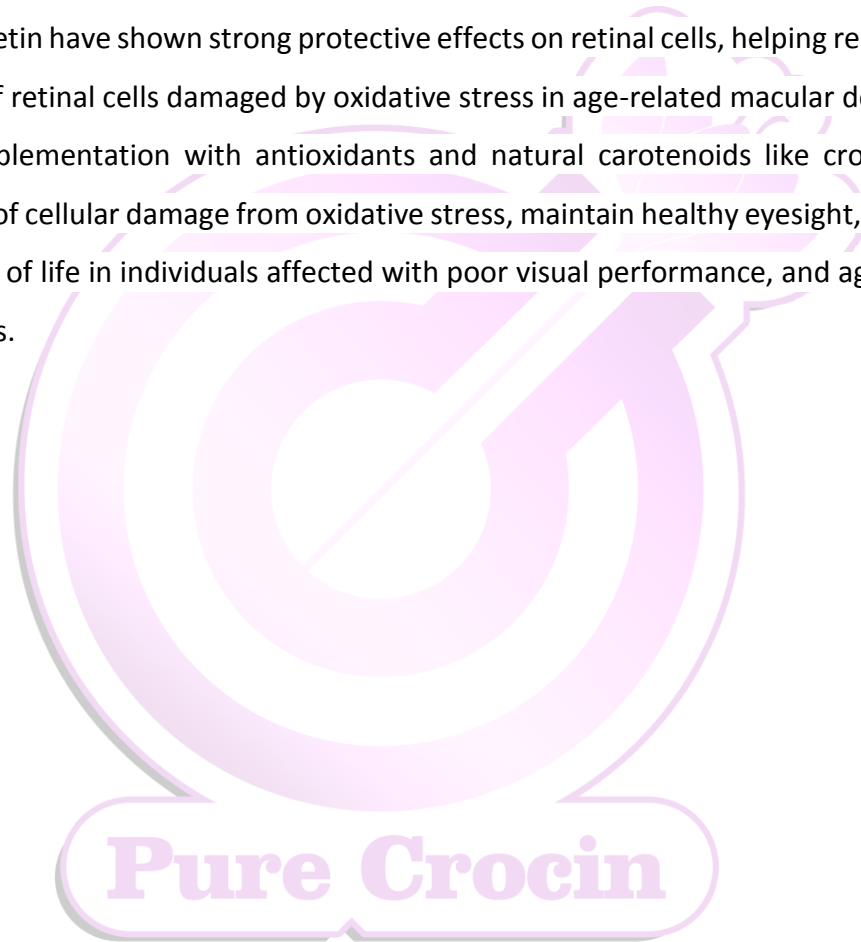
⁴ <https://www.iamcolor.org/safety-of-color/natural-colors/saffron/>



Its coloring power is attributed primarily to Crocins.⁵

Crocin is a unique antioxidant because unlike other carotenoids it is a water-soluble carotenoid. Crocin has shown various pharmacological activities such as anti-oxidant, anti-cancer, learning and memory enhancer in medicinal field.

Crocin and crocetin have shown strong protective effects on retinal cells, helping restore function and structure of retinal cells damaged by oxidative stress in age-related macular degeneration. Nutritional supplementation with antioxidants and natural carotenoids like crocin may help reduce the risk of cellular damage from oxidative stress, maintain healthy eyesight, and may help improve quality of life in individuals affected with poor visual performance, and age-related eye health problems.



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<http://austinpublishinggroup.com/nutrition-food-sciences/fulltext/ajnfs-v3-id1059.php>