

Carotenoids and their isomers : color pigments in fruits and vegetables.

ABSTRACT

Fruits and vegetables are colorful pigment-containing food sources. Owing to their nutritional benefits and phytochemicals, they are considered as 'functional food ingredients'. Carotenoids are some of the most vital colored phytochemicals, occurring as all-trans and cis-isomers, and accounting for the brilliant colors of a variety of fruits and vegetables. Carotenoids extensively studied in this regard include β -carotene, lycopene, lutein and zeaxanthin. Coloration of fruits and vegetables depends on their growth maturity, concentration of carotenoid isomers, and food processing methods. This article focuses more on several carotenoids and their isomers present in different fruits and vegetables along with their concentrations. Carotenoids and their geometric isomers also play an important role in protecting cells from oxidation and cellular damages.

Keyword: Carotene; Cryptoxanthin; Fruit; Lutein; Lycopene; Vegetable; Zeaxanthin.