Summary

Food pigments have an important role as colorants in food industries in enhancing the aesthetic appeal. Pigments are found in minute micro-organisms as well in the animal and plant kingdom. Apart from imparting color, few of these pigments also serve as antioxidants. Therefore, pigments are an important part of food. Carotenoids impart red, orange and yellow color to the plants. Carotenoids can be divided into carotenes, which are hydrocarbons containing only carbon and hydrogen, and xanthophylls are oxygenated derivatives which are made up of carbon, hydrogen, and oxygen. They are generally made up of eight isoprenoid units. The most important member of the tetrapyrroles is chlorophyll, which are green pigments found in all higher plants, algae and photosynthetic bacteria. Chlorophyll is derived from porphin and has a four cyclic tetrapyrrole bridged by single carbons with coordinated magnesium in the center. Chlorophyll *a* has a methyl group whereas chlorophyll *b* has a formyl group. Betalains and anthocyanins have similar color. They are of two types, betacyanins and betaxanthins. Betacyanins are red in color and betaxanthins are yellow in color. Betaxanthins differ from betacyanins where the indole nucleus is replaced with an amino acid where it is proline in case of indicaxanthin and glutamic acid in case of vulgaxanthin. The structure and stability of pigments determine the retention or loss of color. Various factors influence the stability of pigments which include temperature, pH, oxidation and photodegradation.