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## Evaluating the stability of betalain pigments from *Basella rubra* in a model beverage system during storage

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Onsumer acceptance of food is majorly affected by its color. Natural pigments from plant sources are receiving growing interest from food manufacturers, in order to meet consumer perception that natural is safe. The global natural food colors market was USD 1. 3 Billion in 2016 and is expected to reach USD 2.1 Billion by 2023. Betalains are one category of natural pigments which are water-soluble, vacuolar, chromoalkaloids found in plants of the order Caryophyllales. According to their chemical structure, these pigments consist of red-violet betacyanins or yellow betaxanthins. Betalains exhibit a tinctorial strength up to three times higher than anthocyanins and stability in a pH range from 3 to 7 making them suitable for medium acid and neutral foods. The scarce attention towards betalain pigments may be due to restricted number of edible betalainic sources known and also because red beet (Beta vulgaris) has long been the only considered source of betalain pigments. Red beet extracts contain high concentrations of labile betaxanthins, which restricts their use as food colorants. In this work, fruits of Basella rubra L. have been explored as a source of betalains. Basella rubra is an edible perennial vine native to the Indian subcontinent. It also exhibits major biological activities such as androgenic, anti-diabetic, anti-inflammatory and antioxidant. The betalain content in fruit pulp (deseeded) of *B. rubra* was found to be 0.148±0.017 g/100 g which is higher than the reported highest betalainic source namely fruits of Opuntia ficus-indica containing 0.114 g/100 g. The betacyanin:betaxanthin ratio in B. rubra was found to be around 6.34:1. The present study aims at evaluating the stability of betalain pigments from B. rubra in a model beverage system stored under specified conditions. These investigations add value to the use of this plant source as a natural food colorant.

## **Biography**

Amruta Vijay Karangutkar has completed her Bachelor of Science degree in Microbiology and Master of Science in Nutraceuticals from Mumbai University, India. She is presently pursuing PhD (Food Science) from Institute of Chemical Technology (ICT), India. She has worked as a Lecturer in a college for three years prior to joining as a full time Research Student at ICT.

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