Anthocyanin stability studies in Tibouchina semidecandra L.

ABSTRACT

The effects of pH, storage period, temperature, light and dark conditions on the stability of anthocyanins extracted from Tibouchina semidecandra flowers of different developmental stages was evaluated. Fully formed but unopened flower bud had the highest amount of total anthocyanin extracted from fresh petals. The anthocyanin contents for all flower developmental stages were stable at pH 0.5ï 3.0 but the colour of the extracts faded at higher pH values. Degradation percentages of total anthocyanins in the extracts kept at 25 °C were 7ï 20% lower than that maintained at 31 °C. Extracts stored in darkness at 25 °C maintained their purple colour for 26 days while light exposure reduced it to an average of 10 days. The study shows that suitable storage condition for coloured anthocyanin pigments in extracted form is in acidic conditions in the dark. This implies the potential usage of coloured anthocyanins as natural food colourants and shelf life indicator for acidic foods.

Keyword: Anthocyanin; Colourant; Pigment; Melastomataceae; Tibouchina semidecandra L.