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Evaluation of Anthocyanins Extracted From Black Rice, Acai and Purple Cabbage Using Uv-Vis Spectroscopy

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Anthocyanins are bioactive compounds that are present in various fruits and vegetables. They can enhance the visual appeal of food products, as they are responsible for their vibrant purple, blue and red hues. Anthocyanin-rich extracts obtained from plants can change colour in response to pH, temperature, light, and oxygen variations. By changing their colour accordingly to the pH of the food product, the anthocyanins have a potential to be used in active and intelligent food packaging as they can be incorporated in polymer/biopolymer films[1-3]. In this research, a quantitative measurement of anthocyanin content is provided. Anthocyanins were obtained by solvent extraction from black rice, acai, and purple cabbage using different concentrations of ethanol/water and citric acid. The absorbance of the extracted solution was determined using a spectrophotometer. The pH of the extracted solution was adjusted using 1M NaOH or 1M HCl for achieving basic or acidic state, respectively. The color spectrum was immediately measured at a pH range of 2–12 at a wavelength range of 400–700 nm. The colour changes of the extracted solutions were also photographed and monitored using colorimeter[4].

Keywords: Anthocyanins, Uv-Vis spectroscopy

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