

#### Abstract:

Anthocyanins in the pericarp of litchi fruit were isolated to study their color and stability at different pH values at ambient temperature in vitro. The influence of active oxygen, including H<sub>2</sub>O<sub>2</sub> and O<sub>2</sub><sup>-</sup>, on the anthocyanins at different pH values was also investigated. The color of the anthocyanins changed after being diluted in different pH buffers, with the color being red at pH 1.47 and orange at pH 3.30. It was de-colored at pH 4.69 and turned brown at pH 7.01. After 20 days at ambient temperature, the degradation of anthocyanins at pH 1.47, 3.30, 4.69, 7.01 reached 24.5%, 60%, 79.5%, 100%, respectively. These results indicated that the anthocyanins de-colored, turned brown and became unstable as the medium pH increased. The anthocyanins were prone to be destroyed by active oxygen. With 2mM H<sub>2</sub>O<sub>2</sub>, 97.6% of the anthocyanins degraded in 20 hr at pH 5.0 while about 72.3% of the anthocyanins degraded in 30 hr with 20μM O<sub>2</sub><sup>-</sup> at pH 5.0. At pH 1.0 and with H<sub>2</sub>O<sub>2</sub> or O<sub>2</sub><sup>-</sup> the degradation percentage was less but still marked. Since the pericarp pH and the active oxygen level of litchi fruit increased after harvest, de-coloration, less stability, degradation of anthocyanins might be closely associated with pericarp browning.