

Title Effects of low temperature soaking on color and texture of green eggplants
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Abstract

The activities of polyphenol oxidase (PPO) and pectin esterase (PE) in green eggplants during soaking treatments were analyzed to maintain the green color and improve the texture. The optimum temperature of PE was 65 °C, but there was no significant difference from 50 °C to 65 °C, and PE activity could be enhanced by NaCl concentration (0.15–0.25 M); the optimum pH of PPO was at 7.5, but inactivated when the pH was higher than 9.0; Enzymatic browning catalyzed by PPO could occurred when soaking temperature was higher than 55 °C. The trials showed that response surface analysis (RSA) was a suitable method to optimize the soaking conditions. The soaking temperature and soaking time significantly influenced the texture of the green eggplant. Optimum texture (shear force value) was predicted and proved at the conditions of soaking temperature was 52.6 °C, soaking time was 18.9 min and the NaCl concentration was 0.224 M.