

Application of Medium High Hydrostatic Pressure in Preserving Textural Quality and Safety of Pineapple Compote

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Abstract : Compote (fruit in syrup) of pineapple (*Ananas comosus* L. Merrill) is expected to have a high market potential as one of convenient ready-to-eat (RTE) foods worldwide. High hydrostatic pressure (HHP) in combination with low temperature (LT) was applied to the processing of pineapple compote as well as medium HHP (MHHP) in combination with medium-high temperature (MHT) since both processes can enhance liquid impregnation and inactivate microbes. MHHP+MHT (55 or 65 °C) process, as well as the HHP+LT process, has successfully inactivated the microbes in the compote to a non-detectable level. Although the compotes processed by MHHP+MHT or HHP+LT have lost the fresh texture as in a similar manner as those processed solely by heat, it was indicated that the texture degradations by heat were suppressed under MHHP. Degassing process reduced the hardness, while calcium (Ca) contributed to be retained hardness in MHT and MHHP+MHT processes. Electrical impedance measurement supported the damage due to degassing and heat. The color, Brix, and appearance were not affected by the processing methods significantly. MHHP+MHT and HHP+LT processes may be applicable to produce high-quality, safe RTE pineapple compotes. Further studies on the optimization of packaging and storage condition will be indispensable for commercialization.

Keywords : compote of pineapple, RTE, medium high hydrostatic pressure, postharvest loss, texture

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