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[\[PDF \(462K\)\]](#) [\[References\]](#)**Effects of Soaking and High-Pressure Treatment on the Qualities of Cooked Rice**

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In this study, changes in rice qualities from High-Pressure (HP) treatment were investigated. Milled rice grains were presoaked in water at 25 and 55°C for 30 min, subjected to HP treatment at 400 MPa for 10 min, and soaked in water overnight. The effects of presoaking temperature and HP treatment on the physical and chemical properties of rice were evaluated. The viscosities of milled rice grains increased with the soaking process. The total sugar content increased and change in the internal structure of the rice grains occurred after HP treatment. The structural change seemed to promote the water penetration and brought about a higher degree of swelling in rice granules, which might result in a higher degree of gelatinization and higher digestibility of HP-treated cooked rice. HP treatment also brought about denaturation of water soluble proteins and an increase in some free amino acids. HP processing was thus proved to be one of the advantageous processing methods for cooked rice with better palatability.

Key words: high pressure, rice, gelatinization, NMR imaging, digestibility

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