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Characterization of Factors Affecting Properties of Rice Cake and Its Structure

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In the manufacturing process, the relationship between the expansibility of glutinous rice crackers and the properties of gelatinized and retrograded rice flour gel (rice cake) has not been fully clarified. We analyzed glutinous paddy rice from various angles using proximate analysis, amylography, measurement of degree of dispersion and differential scanning calorimetry. The tendencies, depending on cultivars, as measured were related. In particular, it was suggested that the amount and strength of intermolecular hydrogen bonds in rice was related to the expansion volume of rice cake because the enthalpy and peak temperature of DSC is closely related to its volume. Accordingly, it was suggested that DSC might be usable as a common standard for characterization of the factors affecting the properties of rice cake and its structure from the viewpoint of rice cracker expansibility.

Keywords: [rice cake](#), [rice cracker](#), [amylography](#), [degree of dispersion](#), [DSC](#)

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