

# FOOD CHEMISTRY & NUTRITION

July 24-26, 2017 Vancouver, Canada

## Characteristics of *Sigumjang* (fermented barley bran) marinated pork loin

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Changes in physicochemical and textural properties of pork loin marinated with *Sigumjang* (Korean traditional fermented barley bran) were investigated during storage for 14 days. *Sigumjang*-marinated pork loin (SMPL) showed lower lightness and redness but higher yellowness due to the color of *Sigumjang*. The pH level of SMPL slightly increased with time and was equilibrated to pH 5.5 of *Sigumjang* on day 14. Amino type nitrogen content of SMPL linearly increased with marinating time. The MFI of SMPL was reduced during the marinating period, which can be explained by the lower extractability and higher pH of SMPL compared to non-marinated normal pork loin. Free amino acids of SMPL related to sweet and particularly umami tastes such as glutamic acid and aspartic acid were more abundant compared to free amino acids related to bitter taste. In the sensory evaluation, longer marination for 14 days improved values of flavor, taste, texture, juiciness, and overall acceptability of pork loin. Especially, chewiness of SMPL was highly favored and gave excellent palatable texture to SMPL thereby contributing to high taste assessment. Taken together, our results suggest that *Sigumjang* marination could improve the quality of pork loin by granting umami taste and palatable texture. These results also provide useful information for using *Sigumjang* as an ingredient for developing new meat products.

### Biography

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