

October 28-30, 2013 Kansas City Marriott Country Club Plaza, USA

Addition of red beans and kidney beans to rice miso

Shan WU Iwate University, Japan

In recent years, the amount of production and consumption of soybean miso, one of the most popular foods in Japan, has a tendency to be decreased. Red beans and kidney beans are the main farm products in Tokachi, Hokkaido, Japan. However, they were limited to product Japanese sweets traditionally. The purpose of this study was to make a new type of miso with high antioxidant activity using red beans and kidney beans instead of soybeans. Soybeans miso (as control), red bean and soybean (at the ratio of 1:1) miso, kidney bean and soybeans (at the ratio of 1:1) miso (KM) had been fermented for 3 and 6 months using industrial production methods. Each miso sample was measured in color value, L-glutamic acid, soluble solids content, potential of hydrogen, and antioxidant activity (DPPH radical-scavenging activity and reducing power). The results showed that color value, L-glutamic acid, soluble solids content and antioxidant activity of the three kinds of miso vere found to increase with the increase of fermentation time (P<0.05). Conversely, potential of hydrogen of the three kinds of miso reduced, and had the same date. Interestingly, antioxidant activity of red bean and soybean miso was significantly higher than that of soybean miso (P<0.05). The results of this study indicate that red beans can improve the antioxidant activity of miso. We look forward to analyzing the antioxidant activity elevated factor.

Biography

Shan WU has studied food science for 8 years. She has obtained master's degree at Obihiro University of Agriculture and Veterinary Medicine, Japan. She is a Ph.D. student at Graduate School of Agricultural Science of Iwate University, Japan. This year, she had received a scholarship supported by Japanese government and only 12 students got it in the country. Moreover, her study topic won the Pacific Rim Academic Research award (2013).

shankiss33@hotmail.com