Effects of Steeping Time on Appearance and Textural Properties of Cooked Rice

Yoon-Hee Choi1, Sun-Lim Kim, Jin-Song, Aream Chun, Jae-Hyun Kim
and Sae-Jung Suh

National Institute of Crop Science, RDA, Suwon 441-857, Korea

Effects of steeping time at 20°C water for 0, 10, 20, 30, 60, and 90 minute on appearance, textural and sensory taste of cooked rice were examined. The weight of cooked rice was influenced by steeping time, and the weights were increased in orders of Samkwangbyeo > Dongjinbyeo > Chucheongbyeo, and Sindongjinbyeo > Ilpumbyeo. In Samkwangbyeo and Dongjinbyeo, moisture content of rice after steeping, and that and weight of cooked rice were higher than the other varieties. Lightness(L value), moisture contents of rice and cooked rice were gradually increased, while yellowness(b value) and hardness of cooked rice were decreased as steeping time increased. In Chucheongbyeo, sensory taste score of cooked rice showed the significantly positive correlations with hardness, gumminess, and weight/volume of cooked rice, and with moisture content of steeping rice. In Ilpumbyeo, sensory taste score of cooked rice showed the significantly positive correlations with moisture content, color values(L and b-value) of cooked rice, and with moisture content of steeping rice, however it has the significantly negative correlations with color b value and textural properties (springness, gumminess, and chewiness) of cooked rice. Water absorption rate of rice grain of Samkwangbyeo was the highest both at 21°C and 77°C water temperatures.

*Yoon-Hee Choi, +82-31-290-6794, choyhe7@rda.go.kr