Effect of Storage Temperature and Packaging on Quality of Flower Buds of Edible Day Lily[1]

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Summary

To understand the effect of storage temperature and packaging on the quality of flower buds of edible day lily, it is important in transportation and marketing of flower buds of edible day lily. The flower buds were treated by packaging with OPS boxes (CK) or LDPE bags, every packaging was 150g, and storaged in 5℃, 10℃, 15℃ and uncontrolled temperature in room. Changes of weights, appearance, color values and shearing force were investigated. Color changes of flower buds from two to one days before bloomed up were lighting, redding and yellowing, and the L, a, b values were changed from 52.1, 2.4, 26.9 to 58.5, 11.2, 31.5. Low temperature storage and LDPE bags packaging could retard weight loss, diminution of shearing force, blooming up and molding during 7 days of storaging. For example, after 5 days of storaging, the weight of flower buds with boxes packaging treatments storaged in 5℃, 10℃, 15℃ and uncontrolled temperature (145.6g, 143.6g, 139.2g, 135.9g, 135.9g) were all less significantly than LDPE bags packaging treatments (149.8g, 149.6g, 149.3g, 148.7g, 148.7g). In both packaging treatments, the rate of weight loss of flower buds was retarded by low temperature storaging; the shearing force of flower buds with boxes packaging treatments storaged in 5℃, 10℃, 15℃and uncontrolled temperature (1,700.3g/cm^2, 901.7g/cm^2, 597.9g/cm^2, mold) were all less significantly than LDPE bags packaging treatments (1,932.9g/cm^2, 1,724.9g/cm^2, 1,593.3g/cm^2, 1,307.7g/cm^2), the rate of diminution of shearing force of flower buds was retarded by low temperature storaging, too. The color change of flower buds packaging with boxes was faster than packaging with LDPE bags. Storaged in lower temperature could retard the change of color values of edible day lily.

(key words: edible day lily, low temperature storage, modified atmosphere packaging)

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