

Studies on the improvement of processing procedure for dried daylily products¹

Chie-Hsiang Liu² Chun-Ying Tsai³ Hsueh-Shih Lin⁴

Summary

The purpose or objective of this research was to improve the processing procedure for dried daylily flower. The procedure is based on immersing buds on Sodium metabisulfite ($\text{Na}_2\text{S}_2\text{O}_5$) solution. The results indicated that the higher $\text{Na}_2\text{S}_2\text{O}_5$ concentration with longer immersion period, the higher residue of sulfur dioxide in the dehydrated daylily buds. The optimal concentration of $\text{Na}_2\text{S}_2\text{O}_5$ solution was 1.5%, and the optimal immersion period was 12 hours. Two times of repeat utilization of $\text{Na}_2\text{S}_2\text{O}_5$ solution was recommended, which could produce even quality for dehydrated daylily buds. The best ratio between immersion solution and daylily buds was 3:1 (v/v). The sunlight exposure time at eight hours was helpful to decrease the residue of sulfur dioxide from 5735 to 2362 ppm. It also enhanced the appearance of dehydrated products, which was evaluated by Hunter's L, a, and b values. On the other hand, the residue of sulfur dioxide was increased while dehydrated by the oven. It has shown that residue of sulfur dioxide was decreased and the products turned brown gradually during storage. The browning symptom was temperature dependent and lightness independent. The vision quality of dehydrated daylily buds could be maintained for a longer period while stored in 5 °C and dark conditions.

(Key words : daylily, processing, Sodium metabisulfite, storage)

¹Research article No.172 of the Hualien District Agricultural Improvement Station.

²Assistant, Crop Improvement Division, Hualien DAIS.

³Former Assistant, Crop Improvement Division, Hualien DAIS.

⁴Associate Horticulturist and Head, Crop Improvement Division, Hualien DAIS.