Chanthima Macharoen 2007: Preserving of Mangosteen Husk for Dyeing by Drying Method. Master of Home Economics, Major Field: Home Economics, Department of Home Economics. Thesis Advisor: Assistant Professor Kajijarus Piromthamsiri, Ph.D. 136 pages.

The objective of this study was to determine preserving methods of mangosteen husk for textile dyeing. The specific aim was to examine the effects of drying temperature and time, type of packaging, time period for preservation, and the interactions between mentioned factors on the colors of silk fabric. The color values evaluated included lightness (L*), redness-greenness (a*), yellowness-blueness (b*), brightness (C*), hue (h*), color strength (K/S) of the fabric and the color difference (dE*) when compared to the color of the fabric dyed with fresh mangosteen husk. Data were analyzed using Analysis of Variance, and Duncan's New Multiple Range Test was used to examine the difference of the color average.

The mangosteen husks were dried at 50 °C and 70 °C for 12 and 14 hours then kept in paper bags, plastic bags and vacuum bag for 2, 4 and 6 months and then used for dyeing silk fabrics. It was found that 1) drying the mangosteen husks at 50 ° C yielded the lower L*, h*, and dE* values but the higher a* and K/S values than drying at 70 ° C; 2) drying for of 12 hours yielded the lower a*, b*, and C* values but the higher h* value than drying for14 hours; 3) packaging in paper bag yielded the higher L*, b*, C*, h* and dE* values than packaging in plastic bag and vacuum bag; 4) preserving for two months yielded the higher b*, C*, h* and K/S values than preserving for four months and six months. But preserving for four months yielded the higher L* value than preserving for two months and six months. Meanwhile, preserving for six months yielded the higher a* and dE* values than preserving for two and four months.

Moreover, the interaction between drying temperature and drying duration significantly affected the L*, h*, K/S, and dE* values at .01 and affected the a* and b* values at .05 level. The interaction between drying temperature and drying duration significantly affected the b* and C* values at .01 level; the interaction between drying duration and type of packaging significantly affected the h* value at .05 level ; also the interaction between drying temperature, drying duration, keeping duration significantly affected the L* value at .05 level. Lastly, the interaction between drying duration, type of packaging and keeping duration significantly affected the b* and C* values at .01 level.

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