Nathapong Tabtim 2014: The Comparison between Dehydrated Mashed Cassava and Potato by Drum Dryer. Master of Science (Home Economics), Major Field: Home Economics, Department of Home Economics. Thesis Advisor:
Mrs. Nongnuch Siriwong, Ph.D. 78 pages.

This work was aimed to characterize mashed cassava which is required for replace potato and produced the mashed potato. The effect of physical property and ratio of cassava (C) and potato (P) was investigated. The results indicated that only 48.05 % of fresh weight yields can make mashed cassava compare to mashed potato (70.45% of fresh weight). In addition, mashed cassava provided off-white color, higher sticky and coarse texture compare to mashed potato. The ratios of cassava (C) and potato (P) also suggested that higher cassava proportion affected the lower L* a* and b* of mashed potato ($p<0.05$). Consistently, increase of mashed cassava ratio affected hardness, work of penetration, stickiness and adhesiveness of mashed potato ($p<0.05$). This also affected sensory quality of color, watery, smooth, firmness and sticky when increased a proportion of mashed cassava ($p<0.05$). From this study, the ratio of 2:8 of C:P has been shown similar to mashed potato both physical and sensory.

Then, dehydrated mashed cassava and potato flakes production using drum dryer were studied. Twenty two percent of total solid content and roller surface temperature at 125 C^{o} were optimal condition. However, the higher roller surface temperature with different of total solid content decreased moisture content of dehydrated mashed cassava and potato flakes. Although these conditions could not be influenced hardness and adhesiveness, they affected stickiness and work of penetration of reconstituted cassava and potato flakes. The reconstituted cassava flakes showed less acceptance than potato flakes in all attributes ($p<0.05$).

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