Patinya Jiyipong 2009: Development of Nondairy Creamer from Coconut Protein. Master of Science (Food Science), Major Field: Food Science, Department of Food Science and Technology. Thesis Advisor: Associate Professor Sukoncheun Sringam, Ph.D. 84 pages.

In this research, mixture of palm stearin and palm olein and coconut protein, a by product from virgin coconut oil production, were studied for nondairy creamer production. Effects of coconut protein concentration on the stability of emulsion were studied. The results showed decreasing in creaming index, increasing in emulsion stability and L* value with increased protein concentrates. The one with 10% protein was the most stable and had highest lightness. It had 87.1% creaming index, 65.0% emulsion stability, and 84.9 L* value.
The stability of the emulsion was increased by adding dipotassium phosphate at 0.1, 0.2 and 0.3% with carrageenan at 0.02, 0.04, and 0.06%. The result showed that the two agents could improve emulsion stability, while phosphate lowered the lightness. The formular which contained 0.2 % dipotassium phosphate and 0.06% carrageenan gave the most stabilized emulsion and the highest lightness. The creaming of emulsion were reduced by adding 0.2 % polysorbate 60, 0.4 % monoglyceride, and 0.2, 0.4, 0.6 % lecithin. All formulars had no creaming. The formular that contained 0.6% lecithin which had the highest whitening power (ΔL* 24.72) was selected for preparing nondairy creamer emulsion. Nine powdered nondairy creamers were produced from 10% mixed oil of 40, 44 and 48 ^{0}C melting points with 10, 12 and 14% maltodextrin. Powdered nondairy creamers had 5.5-6.9 microns particle size, 0.34-0.36 g/ml bulk density. The melting point of the oils had no effect on whitening power, but the more maltodextrin used, the lower whitening power. Coffee stability test showed no feathering and no creaming for 10 minutes in all samples. The formular that had the highest whitening power and the lowest saturated fatty acid was the one of 10% mixed oil of 40 ^{0}C melting point and 12 % maltodextrin. It had 3% moisture content, 37 % fat and 0.65 % protein.

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