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Development of healthy pumpkin pudding for elderly with different degrees of tooth loss

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The aim of this research was to develop pumpkin puddings which were suitable for elderly in term of texture and nutritional quality. The dessert contains milk protein, pumpkin powder (PP), modified starch, vegetable oil, carrageenan, and sugar. Subjects were grouped into three categories by posterior occlusal contact, according to the Eichner Index. Group A had contacts in four support zones; group B had one to three zones of contact or contact in the anterior region only and group C had no support zones at all, although a few teeth could still remain. The levels of PP added were varied at 4.0, 6.0 and 8.0% (w/w). The textural parameters and color significantly affected by PP concentration. From sensory evaluation, the suitable PP and carrageenan levels were found to be 6.0% PP with 0.2% carrageenan for group A and 8.0% PP with 0.3% carrageenan for group B and C. For group A, the hardness, adhesiveness, cohesiveness and gumminess were 351.33 g, 151.40 G.Sec, 0.46 and 41, respectively. For group B and C, the hardness, adhesiveness, cohesiveness and gumminess were 95.89 g, 105.78 G.Sec, 0.44 and 9.34, respectively. The energy distribution of macronutrients including protein, fat, and carbohydrate for all formulations were about 10-15, 25-30 and 55-65%, respectively. In addition, the pumpkin pudding with 8.0% PP contained 1.60 g total dietary fiber (per 100 kcal), which was classified as a source of dietary fiber. This product could be used for improving nutritional status of elderly.

Biography

Thunnalin Winuprasith is a Faculty Member of Institute of Nutrition, Mahidol University. She has completed her Master's degree and PhD from Institute of Nutrition and Faculty of Science, Mahidol University, respectively. Her research interest focuses on food product development, food emulsions and encapsulations for nutrition aspect.

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