Pengaruh Subtitusi Tepung Terigu dengan Pati Beras Terhadap Karakteristik Fisikokimia, Organoleptik dan Stabilitas Penyimpanan *Cake*

Effect of Wheat Flour Substitution with Rice Starch on the Physicochemical, Organoleptic and Storage Stability Characteristics of Cake

Dr. Titik Budiati, S.TP., M.T., M.Sc., dan Riyanti Ekafitri, S.TP., M.Sc.

Mutimatul Munawaroh
Study Program of Food Engineering Technology
Majoring of Agriculture Technology
Program Studi Teknologi Rekayasa Pangan
Jurusan Teknologi Pertanian

ABSTRACK

Rice starch has the potential to be a substitute for wheat flour in cake making because it has functional characteristics that have the potential to support cake quality, such as the ability to bind water, gel stability during heating to help structure formation, and maintain product moisture. This study aims to determine the effect of wheat flour substitution with rice starch on the physicochemical characteristics, organoleptic and storage stability of cake. The method used in this study was a completely randomized design (CRD) with variations in the concentration of wheat flour and rice starch substitution, namely, 100%:0%, 75%:25%: 50%:50%, 25%:75% and 0%:100%. This study also examined the effect of substitution concentration on the gelatinization profile of the five composite flours used. The results of this study showed that the substitution of wheat flour with rice starch had a significant effect on the moisture content, swelling power, specific volume, texture, color and sensory of the cake produced. The best formulation was found in cake substituted with 25% rice starch with a tighter pore structure. The Independent Sample T-Test test results showed that the hardness, cohesiveness, gumminess and chewiness of the cake with 25% rice starch substitution that had been stored for 7 days were significantly different from the cake without substitution. In addition, the rice starch substituted cake had lower weight loss and enthalpy values than the cake without substitution, which reflected that retrogradation occurred more slowly.

Keywords: *Cake, Organoleptic, Physicochemical, Rice Starch*, *and Staling.*