

The Effects of Applying Wash and Green-A Syrups as Substitution of Sugar on Dough and Cake Properties

Authors : Banafsheh Aghamohammadi, Masoud Honarvar, Babak Ghiassi Tarzi

Abstract : Usage of different components has been considered to improve the quality and nutritional properties of cakes in recent years. The effects of applying some sweeteners, instead of sugar, have been evaluated in cakes and many bread formulas up to now; but there has not been any research about the usage of by-products of sugar factories such as Wash and Green-A Syrups in cake formulas. In this research, the effects of substituting 25%, 50%, 75% and 100% of sugar with Wash and Green-A Syrups on some dough and cake properties, such as pH, viscosity, density, volume, weight loss, moisture, water activity, texture, staling, color and sensory evaluations, are studied. The results of these experiments showed that the pH values were not significantly different among any of the all cake batters and also most of the cake samples. Although differences among viscosity and specific gravity of all treatments were both significant and insignificant, these two parameters resulted in higher volume in all samples than the blank one. The differences in weight loss, moisture content and water activity of samples were insignificant. Evaluating of texture showed that the softness of most of samples is increased and the staling is decreased. Crumb color and sensory evaluations of samples were also affected by the replacement of sucrose with Wash and Green-A Syrups. According to the results, we can increase the shelf life and improve the quality and nutritional values of cake by using these kinds of syrups in the formulation.

Keywords : cake, green-A syrup, quality tests, sensory evaluation, wash syrup

Conference Title : ICFPE 2017 : International Conference on Food Process Engineering

Conference Location : Montreal, Canada

Conference Dates : May 11-12, 2017