

Consumers' delayed consumption of bakery products: effect on physical and chemical properties

ABSTRACT

Delay in the consumption of bakery products has contributed to the food waste problem, which is a serious global issue. Delayed consumption or can be regarded as the 'leftovers' bakery products such as croissants and doughnuts are normally discarded due to the impairment in texture or quality degradation causing them to taste not as good as fresh baked, although the products still edible. Thus, this study aims to evaluate the physical and chemical changes during the delaying of consumption of croissants and doughnuts at three (3) different storage times (day 0, 1 and 2). The hardness of croissants and doughnuts had an increased throughout storage time, with doughnuts have the higher hardness than croissants, with 175.63 % and 92.31 % increased, respectively. Carbohydrate was found as the major component for croissants and doughnuts. Croissants and doughnuts recorded carbohydrate content of (50.32-52.42 %) and (43.22-46.59 %), respectively, from day 0 to day 2. While sugar profile analysis detected three types of monosaccharides sugars, which were fructose, glucose and maltose for croissants and doughnuts. Thus, high content of carbohydrate and monosaccharides that available in the leftovers doughnut and croissants suggest that it could potentially be used as renewable resources for sugar recovery.

Keyword: Bakery products; Food wastes; Physical properties; Chemical properties