Impact of humidified baking on crust and crumb properties of open bread during storage

ABSTRACT

Humidified baking was investigated in the light of producing breads envisaged to have better quality and freshness. Open bread loaves were prepared using the straight dough method where baking was performed with or without humidity at three levels of temperatures of 185, 195 and 205°C, and baking times of 25, 30 and 35 min. Baked breads were evaluated by measuring its crust color and thickness, and bread crumb moisture content and firmness. Humidified baking has no significant effect in enlightening bread crust color ($P > 0.05$) but significantly reduced the crust thickness ($P < 0.001$) and increased the initial moisture content (IMC) of bread crumb. The higher IMC of bread crumb led to a higher final moisture content (FMC) of bread during storage and these helped to reduce the firming rate of bread during a 96 h storage especially for the lower baking temperatures and times. Significant differences ($P < 0.001$) were observed on crust color and thickness, and bread crumb moisture content and firmness as effect of baking temperature and time.

Keyword: Bread; Humidified baking; Crust; Crumb