

The influence of different formulations of palm oil/palm stearin-based shortenings on the quality of white bread.

ABSTRACT

The objective of the study was to determine the effect of different formulations of palm oil/palm stearin-based shortenings on the quality of white bread. In total, eight formulations of bread were prepared, while those made without shortening were used as comparisons with other formulations. The fatty acid compositions of experimental and commercial shortenings were investigated using gas chromatography (GC). The samples of bread were tested for loaf volume, specific volume, crust colour, crumb colour and texture profile analysis. The regression analyses showed that breads made from 100% palm stearin had the highest volume and specific volume, but they were the least in terms of density. In addition, bread crusts without shortening were observed to have lighter colour than those made with shortenings. The hardness (g), springiness(mm), cohesiveness, gumminess(g) and chewiness(gmm) were found to range between 616.7-1430.9, 0.862-0.912, 0.699-0.759, 456.7-1084.8 and 394.7-933.4, respectively. This study demonstrated that using palm oil/palmstearin-based shortenings in breadmaking may contribute to better quality.

Keyword: White bread; Shortenings; Volume; Color; Texture.