ABSTRACT

Flaxseed has recently gained attention as a functional food, and the effect of adding flaxseed (10%, 15%, and 20%) to tortillas was evaluated. The physicochemical characteristics and the free fatty-acid (FFA) content of the oil extracted from flaxseed-added corn tortilla were determined. The results showed that the lipid (4.27%) and protein content (9.10%) of the control sample was statistically lower ($p \leqslant 0.01$) than the tortillas added with flaxseed. In general, the total amylose content did not change with the flaxseed-added content; however, the amylose apparently decreased with the amount of flaxseed, indicating the presence of starch–lipid complexes. The saponification value was 95.37 (mg KOH/g oil) in the tortilla added with 10% flaxseed and increased to 100 (mg KOH/g oil) for the 20% flaxseed treatment. The peroxide value was observed to increase ($p < 0.05$) when the flaxseed flour was added at 10%, 15%, and 20%. In this study, the tortillas exhibited a high amount of total unsaturated fatty acids, 26.32–30.08% (oleic acid). Thus, the flaxseed-added corn tortilla could represent a valuable staple in improving the nutritional value of the original food product.

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