



ABSTRACT

BACKGROUND: The effect of addition of flaxseed flour (10:90, 15:85 and 20:80, w/w) on the chemical composition and starch digestibility of corn tortilla was investigated. Tortillas were baked and frozen in liquid nitrogen, freeze-dried, ground and analyzed for fat, protein, ash, total starch (TS), available starch (AS) and resistant starch (RS) contents as well as for starch hydrolysis rate and predicted glycemic index (pGI). Tortillas made from commercial nixtamalized corn flour were used as control sample.

RESULTS: Flaxseed flour addition increased the fat and protein content of tortilla, whereas TS and AS decreased. TS was 15.25% lower in the 20% flaxseed-containing tortilla as compared to the control sample. The AS content was 12.65% lower in the composite tortilla. RS content in the samples ranged between 1.92% for the control sample and 5.08% for the tortilla containing 20% flaxseed. The reduced enzymatic starch hydrolysis rate and pGI recorded for the flaxseed-added tortilla, indicated slow digestion features.

CONCLUSIONS: Flaxseed-added tortilla might be used to increase the consumption of α -linolenic acid in the daily diet and modulate starch digestibility of corn tortilla. This kind of product may be used by people with special diet requirements. Copyright © 2008 Society of Chemical Industry.

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