DEVELOPMENT OF CEREAL BAR FORMULATED WITH FLOUR OF ACEROLA RESIDUES

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The concern growing with environmental impacts and high wastage caused by the food industry has led to the use of agroindustrial residues. The objective of the work was to evaluate the physico-chemical parameters of cereal bars formulated with flour of acerola residues (FAR). Were prepared of two bars formulations, formulation 1 (F1) with 3% FAR and formulation 2 (F2) with 6% FAR. The products presented 0.97% and 0.90%, pH 5.37 and 5.31 and acidity 0.46% and 0.47% for F1 and F2, respectively. Water activity ranged from 0.52 (F1) to 0.53 (F2), ensuring microbiological stability of products. Reducing and total sugars 29.57% and 52.97% (F1) and 30.38% and 54.80% (F2). According to ANOVA F1 and F2 differ significantly (p=0.05) between them for moisture, protein, lipids, vitamin C and energy value. The average humidity of F1 and F2 was 5.31% and 8.12% respectively. Whereas proteins demonstrated values of 7.73% and 15.14% respectively. The absorption of water, cereal-based food, dependent on protein content and fibers. Vitamin C showed values of 124.98 mg/100g and 218.64 mg/100g (F1 and F2, respectively) and is indicated as an excellent source of vitamin C. The lipids content in the cereal bars ranged from 19.64% (F1) and 12.37% (F2). These values are far above marketed bars (5.0-6.5%), possibly due to addition of the chocolate product formulation. The energy value of bars were 473.06% (F1) and 425.06% (F2), demonstrating that the formulation 2 is the most suitable due its higher protein content, vitamin C and lower energy content.