Toxicity Evaluation of the Cashew Apple Juice (Anacardium occidentale L.) Enriched with bagasses as Co-product in the Juice Extraction


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Cashew apple is a tropical pseudofruit native from Brazil, which is edible and recognized as antioxidant and fiber rich sources. The bagasse generated by processing the juice production is commercially neglected. The cashew apple juice enriched with bagasse flour (CAJF) could be an alternative for the improvement of the nutritional potential. The aim of this work was to evaluate the toxicity of CAJF. Swiss mice were randomly divided into five groups, with six males and six females in each one. Each group received daily oral doses (30 days) of 200 µL of water (Control), cashew apple juice (CAJ) and cashew apple juice enriched with 150, 300 and 600 mg / kg of bagasse flour (CAJF150, CAJF300 and CAJF600, respectively). The body weights were measured weekly and at the end of 30 days the sera were collected for alanine aminotransferase (ALT) and aspartate aminotransferase (AST) evaluation through Kits Labtest. There were no differences in weight gain between the groups in both sexes. There was an increase for ALT and AST activities for CAJF150, CAJF300 and CAJF600 compared to CAJ. No significant difference was observed for ALT and AST activities between Control and CAJ groups. The ALT activities presented for males and females CAJF groups appeared dose depend revealing the highest values for CAJF600 (59.3 and 29.8%, respectively). Contrarily, the highest values for AST activities were attained with CAJF150 for females (11.6%) and CAJF300 for males (16.3%). Apparently there is a potential toxicity for the cashew apple juice enriched with bagasse flour.

KeyWords: Cashew Apple; Anacardium occidentale L; Toxicity.

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