

EVALUATION OF GENOTOXIC AND MUTAGENIC POTENTIALS FROM WATER TREATED WITH *Moringa oleifera* SEED FLOUR

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Seed flour from *Moringa oleifera* is widely used in developing countries as a natural coagulant for water treatment. Lectin and antimicrobial activities were already detected in water treated with *M. oleifera* seeds. The aims of this work were to evaluate the genotoxic effect and mutagenic potential of water treated with *M. oleifera* seed flour according to established protocol. Aliquots of water containing 0.0125, 0.05, 0.2 or 0.8 µg of seed flour/µl were analyzed. Genotoxicity was evaluated by DNA plasmid assay. Mutagenicity was measured according to Kado test using *Salmonella typhimurium* TA97, TA98, TA100 and TA102. Plasmid DNA assay revealed by electrophoresis that there was no break of phosphodiester bonds in DNA molecule. Kado test did not show any mutational effect, by frameshift (TA97 and TA98) or base substitution (TA100 and TA102). These preliminary results indicated that water treated with *M. oleifera* seed flour was not genotoxic nor mutagenic in studied concentrations. However, other mutagenic assays must be performed with soluble active principles to guarantee the security to population of this water treatment.

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Key Words: *Moringa oleifera*, genotoxicity, mutagenicity, Kado test, plasmid DNA.