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EVALUATION OF IN VITRO GENOTOXICITY OF THE COMPOSITE MADE WITH LEATHER WASTE

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Composite was developed from natural rubber with leather waste tanned in chrome. To produce materials with different colors was added iron oxide (COF) or titanium dioxide (CDT). One possible application of these materials is in the textile industry. Thus, the aim of this study was to evaluate the genotoxicity of these new materials (COF and CDT) using CHO-K1 cell line. For the genotoxicity test, liquid extracts of the composites were obtained. The cells were exposed to COF and CDT extracts or PBS (negative control - NC) for 24 and 48 h and the evaluation was performed by Comet assay. The results of Comet assay showed no significant differences in DNA damage of cells exposed to COF and CDT extracts in relation to NC, in either experimental period. Based on these results we can infer that the composite COF and CDT are not genotoxic and can be used in textile application.