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Biosynthesis and characterization of selenium nanoparticles using rind of watermelon (*Citrullus lanatus*)

ABSTRACT. Watermelon (*Citrullus lanatus*) is a cheap and easily available fruit in the local markets of India. The large edible fruit is a berry with a hard rind and no internal divisions, and is botanically called a pepo. The sweet, juicy flesh is usually deep red to pink, with many black seeds. The rind, which is the green skin that keeps all the waterlogged delicious fruit safe, is completely edible. The present study aimed to characterize and evaluate the presence of secondary metabolites in the rind. Therapeutic efficacy of watermelon rind against acrylamide toxicity in the lymphocyte cell line was also studied. As selenium is an important micronutrient, an attempt has been made to prepare selenium nanoparticles using the rind, followed by their characterization.

Keywords: DSC, FTIR, PSA, UV–visible

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