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Superoxide Dismutase Activity of Male Rats after Administration of Extract and Nanoparticle of Ginger Torch Flower

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Abstract : Nanoparticle formulation is often used to improve drug absorptivity, thus increasing the sharpness of the action. Ginger torch flower extract was formulated into nanoparticle form using poloxamer 1, 3 and 5%. The nanoparticle was then characterized by its particle size, polydispersity index, zeta potential, entrapment efficiency and morphological form by SEM. The result shows that nanoparticle formulations have particle size 134.7-193.1 nm, polydispersity index less than 0.5 for all formulations, zeta potential -41.0 - (-24.3) mV and entrapment efficiency 89.93-97.99 against flavonoid content with a soft surface and spherical form of particles. Methanolic extract of ginger torch flower could enhance superoxide dismutase activity by 1,3183 U/mL in male rats. Nanoparticle formulation of ginger torch extract is expected to increase the capability of the drug to enhance superoxide dismutase activity.

Keywords : superoxide dismutase, ginger torch flower, nanoparticle, poloxamer
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