

Antioxidant Activity of Nanoparticle of *Etingera elatior* (Jack) R.M.Sm Flower Extract on Liver and Kidney of Rats

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Abstract : Nanoparticle technology gives a chance for drugs, especially natural based product, to give better activities than in its macromolecule form. The ginger torch is known to have activities as an antioxidant, antimicrobial, anticancer, etc. In this research, ginger torch flower extract was nanoparticlized using poloxamer 1, 3, and 5%. Nanoparticle was charaterized for its particle size, polydispersity index, zeta potential, entrapment efficiency, and morphological form by SEM (scanning electron microscope). The result shows that nanoparticle formulations have particle size 134.7-193.1 nm, polydispersity index is less than 0.5 for all formulations, zeta potential is -41.0 to (-24.3) mV, and entrapment efficiency is 89.93 to 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 drug to enhance superoxide dismutase activity.

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

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