

Abstract

Foeniculum vulgare or known as *adas* in Indonesia is a medicinal plant that belongs to the *umbelliferae* family. It has a lot of pharmacological properties such as antiviral, antimicrobial, antioxidant, anti-inflammatory, anti-anxiety, gastro-protective, estrogenic-like, cardiovascular, lipid-lowering, anti-mutagenic, anti-diabetic, anti-cancer activity, hepatoprotective, and memory-protective characteristics. Hence, *adas* has been suggested as a potential therapy. Toxicity studies of *adas* extract were poorly investigated. The current research used *Mus musculus* mice as the animal model and investigated the subchronic toxicity of the *adas* extract using a biochemical assay to ensure its quality and safety as a potential treatment. The study was carried out in accordance with the Organisation for Economic Co-operation and Development (OECD) regulations. The findings were then utilized in statistical analysis (unpaired t-test) to produce the more valid and reliable result. However, some of the data collected less than three data which was not recommended to use unpaired t-test. The biochemical test also showed a negative value which was caused by technical and human error during the experiment. The present study used doses of 100 mg/kg body weight (BW) *adas* extract that was given orally to each mice. The toxicity assessment was done by calculating the level of each biochemical parameter to determine any adverse effects from *adas* extract towards vital organs.

Keywords: *Adas*, *Foeniculum vulgare*, *subchronic toxicity*, *Mus musculus*, biochemical