

Toxicity of Benzyl Benzoate from *Kaempferia rotunda* L. Rhizome

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Abstract	<p>Benzyl benzoate is the major component of the essential oil of <i>K. rotunda</i> L. rhizome. They are potential to be developed as the medicinal compound. However, the toxicity study of benzyl benzoate as the bioactive compound was still limited. Therefore, the toxicity of benzyl benzoate was investigated. The isolation steps include the extraction of <i>K. rotunda</i> L. rhizome using acetone by maceration, then acetone extract was partitioned with n-hexane and chloroform respectively. The benzyl benzoate from n-hexane fraction was isolated using vacuum liquid chromatography and radial chromatography. The molecular structure of benzyl benzoate was determined based on NMR (1D and 2D) spectroscopic data. The toxicity assay of acetone extract and isolated compounds carried out using the brine shrimp lethality test (BSLT). BSLT results were presented through the lethal concentration 50 (LC50). The toxicity evaluation confirms that acetone extract, n-hexane fraction of <i>K. rotunda</i> L rhizome and the benzyl benzoate have biological activity with LC50 35.86, 49.80, and 173.49 μg/mL respectively.</p>
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