THE CHEMICAL COMPOSITION OF *ALOE VERA* PEEL

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ABSTRACT
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Aloe vera is one of the plant that gave many benefits to human health. *Aloe vera* peel is a part of *Aloe vera* which has chemical composition and biological activities such as antimicrobial, antioxidant, anticancer and anti-inflammatory. The ethanol and hexane extracts of *Aloe vera* peel was characterized and analyzed by using GC-MS and FTIR. Different conditions and solvents (ethanol and hexane) were used to analyze the chemical composition of *Aloe vera* peel. Compounds that were found in both conditions in ethanol extract of *Aloe vera* were consists of 1,2-Benzenedicarboxylic acid, phytol, and Dodecyl cis-9,10-epoxyoctadeconoate. In hexane extract, phytol remains as the major chemical composition that acts as antimicrobial, anticancer and anti-inflammatory. The best condition for the extraction of *Aloe vera* peel is at room temperature compared to heat at 60°C at 60 minutes due to high temperature might damage the biological activities of chemical composition. The FTIR analysis shows that the functional compounds in the *Aloe vera* peel were aromatic acid halide, aliphatic acid halide, ester, carboxylic acid and methyl $-CH_3$. The basic study is focused to determine the chemical compounds from *Aloe vera* peel using Gas Chromatography – Mass Spectrometry (GCMS) and to differentiate the compounds present from *Aloe vera* peel at different conditions and solvents.