PHYTOCHEMICAL SCREENING AND SUSCEPTIBILITY TEST OF *Elaeis guineensis* EXTRACTS AGAINST SELECTED GRAM POSITIVE AND GRAM NEGATIVE BACTERIA AT SKIN

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ABSTRACT

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Elaeis guineensis are usually known as oil palm. *E. guineensis* was come from family family of Aracaceae, subfamily Cocoideae and genus of *Elaeis.* Commonly, the people always used medicinal plant as an antibiotic and as a disease healing. The most important and famous fact about the treatment of the human pathogen was the bacteria have an abilities to develop a resistance to the artificial antibiotic. Related with the problem that was occurred, this project was conducted to determine the minimal inhibitory concentration using disc diffusion of the leaves and oil's palm flower of *E. guineensis* extracts. The percentage yield of the *E. guineensis* in methanol and hexane extracts were also identified in order to choose the suitable solvent for *E. guineensis* to produce a lot amount of crude extracts. Besides that, the presence of secondary metabolite in the extracts of leaves and flower of *E. guineensis* also were identified using reagent and Thin Layer Chromatography (TLC). Based on the observation, the data showed that the percentage yield of methanol leaves extract was the highest yield compared with other extract which was 8.82 % (35.27 g). The results also shows that the hexane leaves extract yielded about 1.08 % (4.3 g), whereas the methanol and hexane flower extract yielded about 5.55 % (22.19 g) and 0.48% (1.9 g) respectively. The total of compound that was present in the methanol and hexane leaves extract by using reagent and Thin Layer Chromatography analysis were alkaloid, flavonoid, tannin, saponin, and terpenoid while the total compound that was present in methanol and hexane of flower extract were flavonoid, glycoside, tannin and saponin. Based on the antimicrobial studies showed that the methanol leaves extract revealed the largest inhibition zone when against *S. aureus* and *P. aeruginosa* which was 14.67 ± 1.20 and 9.00 ± 0.57 at concentration 300 mg/ml.

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