

**DEVELOPMENT OF SHAMPOO FROM MIXTURE OF *Hibiscus rosa-sinensis* (pokok bunga raya) AND *Ocimum basilicum* (pokok selasih)
EXTRACT**

SYAUQINA NAJWA BINTI SALEMIN

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ABSTRACT

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The shampoo is developed by using the extraction of *Hibiscus rosa-sinensis* (pokok bunga raya) and *Ocimum basilicum* (pokok selasih). This study is conducted as a result of the widespread marketing of chemical shampoos to consumers. Although this chemical shampoo might aid in the treatment of hair problems, it has a number of negative side effects on both its users and the environment. To address this issue, organic herbal shampoo has been created. Dandruff and hair fall has been identified as the most common issues that people experience. The methanolic extracts of *Hibiscus rosa-sinensis* and *Ocimum basilicum* will be studied in this investigation since they both have antibacterial activities. This studies examined the effectiveness of this extracts against *Escherichia Coli* (*E. Coli*) and *Bacillus licheniformis* (*B. Lichen*) by using Kirby-Bauer methods. Both agar plates for each bacteria gives good results. The extracts have the ability to inhibit the growth of the bacteria by showing good inhibition zone diameter. Zone of inhibition of the extracts with low, medium and high concentration for *E. Coli* are 8 mm, 10 mm and 12 mm. Meanwhile, inhibition zone for *B. Lichen* are 7 mm, 11 mm and 12 mm respectively. This demonstrates that every extract have antibacterial agents such as flavonoids, alkaloids, saponins and tannins as their compounds. This has demonstrated the possibility of creating shampoo from natural sources like *Ocimum basilicum* and *Hibiscus rosa-sinensis* to treat dandruff and hair loss.

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

Shampoo is actually one of the essential things in our life. For a normal human being, it is very standard for our hair to produce oil. As a way to hydrate our scalp and protect the hair, healthy hair produces a certain amount of sebum or oil (Watson, 2019). This will keep our hair moisturized. The excessive amount of oil produced, combined with sweat and dirt from our daily activities, will undoubtedly cause our hair to stink (Larson, 2021). However, just washing hair with tap water will not always eliminate odours or remove dirt. Thus, utilising a shampoo is quite useful and crucial in resolving these issues as shampoo aids effectively in removing dirt and smells. Unfortunately, many shampoos on the market today might have serious side effects on their users. Surfactants used in chemical shampoos including sodium lauryl sulphate (SLS), paraben, dimethicone and others, are all harmful because they block pores and create scalp irritation (Schaefer, 2015). Numerous chemicals found in shampoo, according to research, can lead to serious health issues like cancer, memory loss, eye and skin irritation, hair follicle damage, and hair loss (Vinall, 2020). Even if there are other aspects that lead to this effects such as genetics and lifestyle, we cannot deny