DEVELOPMENT OF HAND SANITIZER USING MIXTURE OF BASIL LEAVES (OCIMUM BASILICUM) AND ALOE VERA

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BACHELOR OF SCIENCE (Hons.) APPLIED CHEMISTRY
IN FACULTY OF APPLIED SCIENCES
UNIVERSITI TEKNOLOGI MARA

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FINAL YEAR PROJECT REPORT SUBMITTED IN
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This Final Year Project entitled "**Development of Hand Sanitizer using Mixture of Basil Leaves and Aloe Vera"** was submitted by Muhammad Akmal Hakim Bin Badrol Hisam in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Applied Science, in the Faculty of Applied Sciences, and was approved by

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TABLE OF CONTENT

ABSTRACT

DEVELOPMENT OF HAND SANITIZER USING MIXTURE OF BASIL LEAVES AND ALOE VERA

The hand sanitizer is developed by using the extraction of Basil leaves and Aloe vera. This study is conducted as a result of the widespread marketing of chemical hand sanitizer to consumers. In recent years, the importance of hand hygiene has been emphasized globally as a crucial measure in preventing the transmission of infectious diseases. Hand sanitizers have gained immense popularity as a convenient and effective solution for disinfecting hands on the go. While commercial hand sanitizers are widely available, there is a growing interest in natural alternatives that offer both safety and efficacy. The ethanolic extracts of Basil leaves and Aloe vera 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 subtilis (B. subtilis)* 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. This demonstrates that every extract has antibacterial agents such as flavonoids, alkaloids, saponins and tannins as their compounds. The use of natural ingredients like basil and aloe vera in hand sanitizers aligns with the growing consumer preference for sustainable and eco-friendly products. By harnessing the power of these botanicals, it can potentially develop a hand sanitizer that not only fulfills its primary purpose of killing germs but also offers a pleasant sensory experience and supports overall skin health.