FORMULATION OF GUAVA SEED EXTRACT FOR THE APPLICATION ON SUNSCREEN LOTION

MUHAMMAD NUR HUSAINI BIN ANJANG JAFFAR

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Name	:	MUHAMMAD NUR HUSAINI BIN ANJANG JAFFAR
Student ID	:	2022745405
Program	:	AS245
Course code	:	FSG671
Mobile Phone	:	
E-mail	:	2022745405@student.uitm.edu.my

Approval by Main Supervisor :

I certify that the work conducted by the above student is completed and approve this report to be submitted for evaluation.

Supervisor's name	:	NOOR HAFIZAH BINTI UYUP
Date	:	29/7/2024
Turnitin Similarity %	:	27%
Signature	:	

ABSTRACT

FORMULATION OF GUAVA SEED EXTRACT FOR THE APPLICATION ON SUNSCREEN LOTION

This study explores the innovative use of guava seed extracts as a natural ingredient in sunscreen formulations, aiming to provide an effective and eco-friendly alternative to synthetic sunscreens. Flavonoid compounds were extracted from guava seeds using the maceration extraction method, a process chosen for its efficiency and ability to preserve the bioactive compounds. The extracted flavonoids were then analyzed using UV-Vis spectroscopy, which revealed significant UV absorption peaks at 362 nm and 298 nm with absorbance values of 0.39743 and 0.6653, respectively. These peaks indicate robust photoprotective properties across both UV-A and UV-B ranges. The formulated sunscreen demonstrated an SPF value of 20, highlighting its potential for substantial UV protection. The comprehensive in-vitro testing established the effectiveness of guava seed extracts in providing broad-spectrum UV protection, suggesting that they could serve as a viable natural alternative to synthetic ingredients. Finally, consumer acceptance studies are crucial to assess the sensory attributes, application properties, and overall satisfaction with the product, ensuring it meets market demands.

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