



Thera ProTech: A LED EMS Sunscreen Duo

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ABSTRACT

The study investigates the feasibility and market viability of Thera ProTech, an innovative, portable skincare device integrating sunscreen application with electrical muscle stimulation (EMS) and Red-Light Therapy. Thera ProTech is designed for consumers seeking multifunctional, cost-effective skincare solutions, and addresses UV protection and skin rejuvenation. This feasibility study explores the product's potential in Nasugbu, Batangas, leveraging its tropical climate and consumer demand for sun protection and skin wellness products. The study presents a comprehensive evaluation of marketing, operational, financial, and socio-economic aspects. The researchers employed surveys to gauge consumer willingness to purchase and the demographic preferences. Results highlighted significant interest across diverse age groups, with female respondents demonstrating higher purchasing intent.

The proposed product development includes eco-friendly and refillable designs, ensuring environmental sustainability. Financial analysis suggests promising profitability, while operational strategies focus on streamlined production and efficient resource management. Employing surveys to gauge consumer willingness to purchase and demographic preferences,

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the research design was quantitative and descriptive, involving 55 respondents. A descriptive research design was employed using purposive sampling to collect data from respondents aged 13 years and older. Demographic data and product preferences were analyzed to determine market acceptance.

Survey results showed significant interest across all age groups, with 27% of respondents aged 26 to 40 being key potential buyers. Women demonstrated higher purchasing intent, aligning with market trends favoring multifunctional skincare solutions. Respondents highlighted convenience, cost-effectiveness, and portability as significant advantages. These features, combined with targeted marketing, position Thera ProTech as a competitive product in the beauty and wellness industry. Thus, Thera ProTech demonstrated strong feasibility and market potential. Strategic recommendations include offering various tube sizes, enhancing digital marketing, and emphasizing sustainability to cater to diverse customer preferences.

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SINGLE

A 20mL sunscreen made from sunflower oil, distilled water, olivem 1000, aloe vera gel, non-nano zinc oxide, fragrance Oil (flower extract), phenoxyethanol, hyaluronic acid attached in a facial device that has Red-Light Therapy and Electrical Muscle Stimulation (EMS).



SUNSCREEN REFILL

A 20mL sunscreen made from sunflower oil, distilled water, olivem 1000, aloe vera gel, non-nano zinc oxide, fragrance Oil (flower extract), phenoxyethanol, hyaluronic acid

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November 3, 2024

CERTIFICATE OF CONFORMITY

This is to certify that the Liniment formulation, with brand name "Thera Protech", created by **Mikee Yvette T. Borce, Shiela May D. Liwanag, Marckjohn B. Magalpoc, Diana Mae B. Medina and Laica B. Salonzo**, adheres to industry standard and is ensured that each raw material is following the allowable levels in the state local regulatory guideline at the given point in time. This also certifies that the raw materials used are safe and no harmful chemicals are used in the production of this product. Below is the formulation and procedure that was assessed at the given point in time:

Raw Material	Percentage (%)
Sunflower Oil - <i>Helianthus Annuus</i> Seed Oil	23.30
Olivem 1000 - <i>Cetearyl Olivat</i> , <i>Sorbitan Olivat</i>	11.65
Aloe Vera Juice – <i>Aloe Barbadosensis Juice</i>	46.1
Hyaluronic Acid	1.63
Zinc Oxide	13.98
Fragrance (Parfum)	0.58
Phenoxyethanol	1.05
Distilled Water	1.19
Total	100

Procedure

In the double boiler bowl, combine Sunflower Oil and Olivem 1000 under 35C. Heat the mixture gently until the Olivem 1000 is fully melted and incorporated with the Oil. Stir until the mixture cools, and set aside. In a separate bowl, mix Aloe Vera and Hyaluronic Acid, and stir it until Hyaluronic acid dissolve. When Hyaluronic acid is dissolve, add drops of water. The water and oil phase is mixed at 35C. Continue mixing it at 35C for 5 minutes. Slowly pour the mixture of Aloe Vera into the oil mixture while whisking or blending continuously. This creates the base for sunscreen. Use a spatula to mix for a smoother texture. Once the emulsion is formed and slightly cooled sift in Zinc Oxide. Whisk or blend it thoroughly to avoid clumps and ensure it disperses evenly throughout the mixture. (Zinc Oxide is the active sunscreen ingredient, so it is crucial that it is well-mixed for even sun protection) Add Fragrance Oil (Flower Extract) for fragrance. Stir in Phenoxyethanol, which will act as a preservative to prevent microbial growth. Allow the mixture to cool completely to room temperature. Once it is fully cooled, Measure pH and target pH should be 4.5-7. Transfer the sunscreen into a sterilized container. Label and store the sunscreen in a cool, dry place.

Any adjustment to the formulation will deem this certificate invalid.


Janeyri Adelle Pascua

Licensed Chemist PRC#0013114

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