

Title : Development of a Novel Whipped-Cream-Textured Sunscreen Formulation with SPF 50+ PA++++

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ABSTRACT

This cooperative education project was carried out at the Institute of Beauty and Health Sciences Research Co., Ltd. with the aim of developing a new innovative sunscreen formulation with SPF 50+ PA++++ and a whipped cream texture. The work included studying basic formulation principles, reviewing ingredient properties, and conducting several formulation trials. Basic physical properties such as pH, texture, color, and odor were evaluated, together with stability testing under five different storage conditions to assess product stability. Samples were also submitted for further testing on sun protection performance, water and sweat resistance, and preservative effectiveness. However, due to the limited timeframe, these efficiency results are not yet available and require further testing in the future.

From the experiments, formulation code AAC-035 was considered the most suitable. It showed a lightweight whipped cream-like texture that met the objectives, good initial stability without phase separation, and a safe pH range for use. In addition, the developed base formulation can be extended to other product types such as mousse sunscreens. This shows that the formulation has good potential to become a high-quality sunscreen that meets consumer needs and could be further developed for large-scale production and future commercialization.



Figure 1. The whipped-cream-textured sunscreen formulation AAC-035.

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