

Application of seed oils and its bioactive compounds in sunscreen formulations

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Abstract

The photoprotective skincare products are in high demand to meet the consumer market with concern on skin health. Seed oils are commonly used as ingredients in many cosmetic products due to their natural antioxidants and now being increasingly recognised for their effects on skin health and photoprotection. This article briefly reviews the application of seed oils in sunscreen development focusing on the antioxidants that contribute to photoprotection, thus preventing UV-induced erythema and photoaging. The addition of seed oils that contain specific natural bioactive compounds were discussed in the review. Besides that, seed oils acting in molecular pathways that benefit in photoprotection were also summarized. Seed oils (pomegranate seed oil, castor oil, cocoa butter, jojoba oil, rosehip oil, grapeseed oil, kenaf seed oil and pumpkin seed oil) utilization have high potential to act as natural UV filters and at the same time help in skin repairing. The seed oils contributed beneficial properties to the sunscreen formulation by their synergistic effect with antioxidants, antiaging properties, anti-inflammatory effect, and potential hormetic effect. The finding of specific bioactive compound from seed oils provide better understanding on the contribution of seed oils in sunscreen formulation.

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