

INTISARI

Tingkat paparan radiasi UV di Indonesia tergolong tinggi menyebabkan kanker kulit menjadi salah satu kanker yang paling umum di Indonesia. Tabir surya merupakan produk yang umum digunakan untuk proteksi kulit terhadap radiasi UV. Senyawa polifenol flavonoid diketahui memiliki kemampuan fotoproteksi, sehingga dapat dijadikan bahan aktif dalam formulasi tabir surya. Tujuan penelitian ini adalah mengkaji kemampuan fotoproteksi senyawa polifenol flavonoid dari berbagai ekstrak tanaman terhadap UVA dan UVB, mengkaji formula tabir surya dalam bentuk sediaan *lotion* dan gel dengan polifenol flavonoid sebagai bahan aktifnya beserta stabilitas fisiknya. Metode yang digunakan adalah *narrative review* dari literatur nasional maupun internasional.

Hasil tinjauan menunjukkan flavanol, flavonol dan antosianin yang merupakan sub kelas flavonoid memiliki kemampuan fotoproteksi yang baik. Flavonol dan antosianin mampu menyerap UV, sedangkan flavanol mampu mencegah kerusakan kulit akibat radiasi UV. Sediaan *lotion* dan gel dari ekstrak tanaman yang mengandung polifenol flavonoid memiliki stabilitas yang baik, dan penggunaan eksipien di dalam formulasi tabir surya memengaruhi parameter fisik serta stabilitas sediaan.

Kata Kunci: polifenol, flavonoid, *lotion*, gel, formulasi

ABSTRACT

The level of exposure to UV radiation in Indonesia is relatively high, causing skin cancer to be one of the most common cancers in Indonesia. Sunscreen is a product that is commonly used for skin protection against UV radiation. Flavonoid polyphenol compounds are known to have photoprotective abilities, therefore they can be used as active ingredients in sunscreen formulations. The purpose of this study was to examine the photoprotection ability of polyphenolic flavonoid compounds from various plant extracts against UVA and UVB, to examine the formulation of sunscreens in the form of lotions and gels with polyphenol flavonoids as active ingredients and their physical stability. The method used is a narrative review of national and international literature.

The results of the review show that flavanols, flavonols and anthocyanins, which are a sub class of flavonoids, have good photoprotection abilities. Flavonols and anthocyanins are able to absorb UV radiation, while flavanols are able to prevent skin damage caused by UV radiation. Lotion and gel preparations from plant extracts containing flavonoid polyphenols have good stability, and the use of excipients in sunscreen formulations affects the physical parameters and stability of the preparations.

Keywords: polyphenols, flavonoids, lotion, gel, formulation