

INTISARI

Tea tree oil (TTO) telah diketahui memiliki manfaat yang beragam antara lain antibakteri dan *antifungi*. Seiring perkembangan zaman TTO banyak dikembangkan menjadi sediaan farmasi maupun kosmetik. Ulasan ini bertujuan untuk mengevaluasi sifat fisik dan stabilitas kimia pada sediaan topikal TTO. Penelitian termasuk *narrative review* dengan menggunakan data yang diperoleh dari *database Science direct, Scopus, Pubmed, dan Google Scholar*. Penelusuran literatur berdasarkan kata kunci dan diseleksi sesuai kriteria inklusi dan eksklusi yang ditentukan. Literatur yang sesuai selanjutnya dianalisis dan diulas menjadi sebuah *review article*. Total terdapat 36 artikel yang ditelaah sesuai kriteria inklusi dan eksklusi pada penelitian ini. Hasil *review* menunjukkan bahwa TTO telah diformulasikan menjadi berbagai bentuk sediaan yaitu emulsi, gel, film, liposom, dan lain-lain, masing-masing dengan bentuk modifikasi tiap sediaan tersebut. Sediaan TTO memiliki beragam aktivitas dan manfaat yaitu sebagai antibakteri, antijamur, *wound healing*, penggunaan kombinasi, dan lainnya. Berdasarkan hasil analisis pendekatan bentuk sediaan dan data yang didapat dari jurnal pendukung, didapatkan bentuk sediaan emulsi dan sediaan gel yang memiliki bentuk stabilitas fisika dan kimia paling stabil karena dapat melindungi TTO dari pengaruh cahaya, panas, kelembaban, dan oksigen dengan didukung kemasan yang sesuai.

Kata kunci: *Tea tree oil*, evaluasi, formulasi, stabilitas

ABSTRACT

Tea tree oil (TTO) has been known to have various benefits including as antibacterial and antifungal. Along with the times, TTO has been developed into pharmaceutical and cosmetic preparations. This review aims to evaluate physical stability and chemical stability of topical preparations containing TTO. This study classified as a narrative review using data obtained from the database sources namely Science Direct, Scopus, Pubmed, and Google Scholar. Literature searched was conducted based on the keywords and selected according to pre-determined inclusion and exclusion criteria. The appropriate literature was then analyzed and reviewed to create a review article. A total of 36 articles were reviewed according to inclusion and exclusion criteria in this study. The review results revealed that TTO has been formulated into various dosage form, such as emulsions, gels, films, liposomes, and others, each with specific modifications. Tea tree oil preparations have diverse activities and benefits, including antibacterial, antifungal, wound healing, combination use, and others. Based on the analysis of formulation approaches and data obtained from supporting articles, it was found that emulsion and gel formulations exhibit the most stable physical and chemical properties, as they can protect TTO from the influences of light, heat, moisture, and oxygen, with appropriate packaging support.

Keywords: *Tea tree oil, evaluation, formulation, stability*