# INTISARI

Antioksidan dapat mencegah pembentukan radikal bebas. Antioksidan alami lebih banyak dimanfaatkan karena lebih mudah didapat. Penelitian ini bertujuan untuk membandingkan potensi aktivitas antioksidan kurkumin dengan vitamin A dan vitamin E yang termasuk dalam kategori antioksidan alami. Kurkumin terkandung dalam rimpang beberapa spesies Curcuma dari family Zingiberaceae yang dikembangkan menjadi sediaan topikal sehingga dilakukan uji stabilitas fisik untuk menjaga kualitas sediaan.

Penelitian ini berupa *narrative review* yang secara garis besar terdiri dari penelurusan literatur, seleksi literatur, interpretasi literatur. Total 21 artikel penelitian diperoleh dari *database*, yaitu *Google Scholar*, *ScientDirect* dan Scopus yang dibandingkan dan ditarik kesimpulan dari data yang telah dikumpulkan.

Hasil penelitian dengan menggunakan metode DPPH menunjukkan bahwa kurkumin, vitamin A, dan vitamin E memiliki aktivitas antoksidan yang sangat aktif dengan hasil parameter IC50 <50 µg/mL. Gugus hidroksi juga berperan penting dalam menetralkan radikal, kurkumin dengan jumlah gugus hidroksi sebanyak 2 buah memiliki potensi aktivitas antioksidan yang lebih besar jika dibanding vitamin E dan vitamin A. Kurkumin yang terkandung dalam berbagai macam jenis sediaan topikal seperti gel, krim, dan emulgel memiliki stabilitas fisik yang baik.

**Kata Kunci : *narrative review*, kurkumin, antioksidan, topikal, stabilitas fisik**

# ABSTRACT

Antioxidants can prevent the formation of free radicals. Natural antioxidants are more widely used because they are easier to obtain. This study aims to compare the potential antioxidant activity of curcumin with vitamin A and vitamin E which are included in the natural antioxidant category. Curcumin is contained in the rhizomes of several species of Curcuma from the Zingiberaceae family which are developed into topical preparations so that physical stability tests are carried out to maintain the quality of the preparations.

This research is in the form of a narrative review which in general consists of searching literature, selecting literature, interpreting literature. A total of 21 research articles were obtained from the database, namely Google Scholar, ScientDirect and Scopus which were compared and drawn conclusions from the data collected.

The results of the study using the DPPH method showed that curcumin, vitamin A, and vitamin E had very active antioxidant activity with the results of the IC50 parameters <50 µg/mL. The hydroxyl group also plays an important role in neutralizing radicals, curcumin with 2 hydroxyl groups has greater antioxidant activity potential compared to vitamin E and vitamin A. Curcumin contained in various types of topical preparations such as gels, creams, and emulgel had good physical stability.

**Keywords: narrative review, curcumin, antioxidants, topical, physical stability**