

DEVELOPING COSMETIC FORMULAS WITH *HELICHRYSUM* *ITALICUM*

SUMMARY

Everlasting (*Helichrysum italicum* (Roth) G. Don) essential oil, a natural antioxidant, is one of the most popular ingredients used by the cosmetic industry. The spicy scented essential oil is also being requested in the perfume industry. In this study, the chemical composition, antioxidant and antimicrobial properties of the essential oil obtained from the *Helichrysum italicum* (Roth) G. Don grown in Datça region of Turkey were investigated. The essential oil yield was determined as 0,27%. The chemical composition of the essential oil was analysed by gas chromatography mass spectrometry and gas chromatography flame ionization detector (GS-MS/FID). 30 components of the essential oil were determined and quantified. The main components of the essential oil were found to be γ -curcumene (13,98%), neryl acetate (11,67%) and alpha pinene (10,84%). The antioxidant activity (IC₅₀) of the essential oil was measured by DPPH and found to be 37,63 (μ g/mL). In the beta carotene/linoleic acid (BCB) antioxidant test, essential oil of *Helichrysum italicum* (Roth) G. Don had an inhibition of 78%. *Helichrysum italicum* essential oil performed high antimicrobial activities measured with CLSI disc diffusion and broth microdilution methods against 6 different bacteria and 2 yeast strains.

Keywords: Everlasting flower, essential oil, chemical composition, antioxidant, antimicrobial