

Antiradical Activity of Hydrolyzed and Non-hydrolyzed Extracts from *Helichrysi inflorescentia* and its Phenolic Contents

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A methanol extract was obtained from defatted (petroleum ether) inflorescence of *Helichrysum arenarium* (L.) Moench (perennial herb native to Middle and Southeast Europe). The extract was evaporated under reduced pressure and the dry residue was dissolved in hot water. The aqueous solution was stored for 6 d at 4 °C and the precipitate discarded. The remaining solution was divided into three aliquots a, b and c. Part a was extracted with ethyl acetate to obtain extract (A), part b was extracted with diethyl ether to obtain extract (B) and part c was subjected to alkaline hydrolysis and then extracted with diethyl ether to obtain extract (C). Extracts (A), (B) and (C) were evaporated under reduced pressure to obtain the dry residues A, B and C which were further investigated for phenolic compound content by TLC and HPLC and for antiradical activity with 2,2-diphenyl-1-picrylhydrazyl radical (DPPH•) as a substrate.

Residue C exhibited stronger antiradical properties than non-hydrolysed residues A and B. HPLC analysis showed a great increase of caffeic acid in residue C.

We concluded that the hydrolysis process led to a significant increase of free caffeic acid (strong antioxidant) concentration resulting in increased antiradical activity of residue C.

Key words: Antiradical Activity, Plant Extracts, Plant Phenolics