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CHEMICAL COMPOSITION AND ANTIBACTERIAL EFFECT OF ESSENTIAL OIL FROM *PULICARIA GNAPHALODES*

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In this study the chemical composition of *Pulicaria gnaphalodes* essential oil was evaluated by GC/MS analysis. Among the 34 components accounting 96.3% of the total amount, Alpha-pinene (32.2%), 1-8-cineole (10.9), Beta-citronellol (8.9%), Alpha-terpineol (6.9%), 4-terpineol (6.5%), and Mertenol (5.6%) were the major components. The antibacterial activity of essential oil from *P. gnaphalodes* against some foodborne bacteria were investigated. The growth inhibition zone of *Listeria monocytogenes, Bacillus cereus, Staphylococcus aureus, Salmonella* Typhimurium, and *E. coli O157 H7* was 12.5, 11, 12, 10.5, and 18.5 mm, respectively. *B. cereus* was the most sensitive strain with MICs of 0.025% EO, while *S.* Typhimurium, and *E. coli O157 H7* were inhibited at EO concentration of 0.2%. The result of this study confirms the antimicrobial activity of *P. gnaphalodes* EO and suggests its potential application in food systems to prevent the growth of food-borne bacteria and extend the safety and shelf-life of foods.

Keywords: *Pulicaria gnaphalodes*, essential oil, chemical composition, antimicrobial activity

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