

Antimicrobial Effect of Essential Oil of *Tanacetum argenteum* (Lam.) Willd. subsp. *canum* (K. Koch) Grierson var. *canum*

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Aim of the study: The aim of present study was determined in vitro the antimicrobial efficacy of essential oil obtained from *Tanacetum argenteum* (Lam.) Willd. subsp. *canum* (K.Koch) Grierson var. *canum*.

Material and Methods: The plant was collected from Amasya (between Direkli village and Yassıçal town). Antimicrobial activity was evaluated by determination of the disc diffusion methods, MIC and MLC. Air-dried aerial parts of plant were subjected to hydro-distillation.

Results: It was shown that the essential oil was active against indicator organisms used in this study. The maximal inhibition zone diameter were as follows: *E. cloacae* ATCC 28355 (14 mm), *P. fluorescens* ATCC 55241 (16 mm), *P. aeruginosa* ATCC 27853 (19 mm), *S. sonnei* RSKK 8177 (18 mm), *E. coli* ATCC 25922 (21 mm), *E. coli* O157:H7 (13 mm), *Y. enterocolitica* RSKK 1501 (11 mm), *C. jejuni* ATCC 33291 (12 mm), *K. pneumoniae* ATCC 27736 (13 mm), *S. enteritidis* RSKK 171 (12 mm), *S. aureus* ATCC 33862 (26 mm) and *S. aureus* ATCC 25923 (29 mm), *M. luteus* NRLL B-4375 (20 mm), *E. faecalis* ATCC 19433 (19 mm), *B. cereus* NRRL B-3711 (30 mm), *B. cereus* RSKK (32 mm), *Candida albicans* ATCC 10231 (19 mm) and *C. tropicalis* (17 mm). The minimum inhibitory concentration (MIC) and minimum lethal concentration (MLC) values for all pathogens were ranged from 62.5-900 µg/ml and 125-1000 µg/ml, respectively. *T. argenteum* subsp. *canum* var. *canum* essential oil was the most active against *B. cereus* NRRL, B 3711 and *B. subtilis* RSKK 867. Also, the essential oil has shown a strong anti-candidal activity against two *Candida* species.

Keywords: *Tanacetum argenteum* subsp. *canum* var. *canum*, essential oil, antimicrobial activity