

Department of Biology and Ecology,
Faculty of Sciences and Mathematics, University of Niš
Institute for Nature Conservation of Serbia

**13th Symposium
on the Flora of Southeastern Serbia
and Neighboring Regions**

Stara planina Mt. 20 to 23 June 2019



**13. Simpozijum
o flori jugoistočne Srbije
i susednih regiona**

Stara planina 20. do 23. jun 2019.

**ABSTRACTS
APSTRAKTI**

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Abstracts

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Composition and antimicrobial activity of lavender, *Lavandula angustifolia* Mill. (Lamiaceae) essential oil against standard strains and wound isolates of bacteria

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Lavender flower and essential oil are traditionally used for relief of mild mental stress and to aid sleep. *Staphylococcus* spp. are part of skin microbiota and frequent contaminants of the wounds. The aim of the study was to investigate the composition and antimicrobial activity of lavender oils on standard strains of bacteria, wound isolates of *Staphylococcus epidermidis* and *S. aureus* and also the activity of the oil in the combination with gentamicin. The essential oils were analysed by GC-FID/GC-MS. Sensitivity of seven standard bacterial strains and eight wound isolates of staphylococci were examined by disk-diffusion or broth-microdilution method. The dominant components in the essential oils of lavender flower were: linalool, linalyl acetate and camphor and in oil of leaves and stems borneol, 1,8-cineol and camphor. The essential oil of lavender inhibited the growth of laboratory bacterial strains (MIC 0.125 – 1 mg/ml). The best activity (0.125 mg/ml) was obtained with commercial samples that contained higher content of camphor and borneol. The essential oil of lavender flower (2%) inhibited the growth of multiresistant wound isolates of staphylococci. Significant synergistic effects against *Staphylococcus* spp. were observed in combinations of subinhibitory concentrations of essential oils (15.6 – 31.2 µg/ml) and gentamicine (0.06 – 0.25 µg/ml).

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