

Chemical Composition, Antibacterial and Antioxidant Effect of *Salvia Officinalis*, *Mentha Piperita* and *Mentha Longifolia*

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Abstract

Background and Objective: The aim of this study was to evaluate chemical composition, antibacterial and antifungal effect and antioxidant property of *Salvia officinalis*, *Mentha piperita* and *Mentha Longifolia*.

Material and Methods: At first, chemical analysis of essential oils was determined using GC/MS. Then the antibacterial and antifungal effect of tested essential oils on *L. monocytogenes*, *S. aureus*, *S. typhimurium* and *E. coli* and two fungal strains including *A. niger* and *A. flavus* were determined using disk diffusion agar and broth microdilution methods. The antioxidant property of essential oils was evaluated using DPPH assay.

Results: Linalool (14.38%), l. menthone (19.03%) and δ -terpinene (21.78%) were the major components of *Salvia officinalis*, *Mentha piperita* and *Mentha Longifolia*, respectively. all tested essential oils had antibacterial effect on foodborne pathogens, which was comparable with tetracycline's effect. In addition, all essences had appropriate antioxidant potential compared with BHT.

Conclusion: based on the results, *Salvia officinalis*, *Mentha piperita* and *Mentha Longifolia* can be introduced as appropriate natural preservatives.

Keywords: *Salvia officinalis*; *Mentha piperita*; *Mentha Longifolia*, Antibacterial Agents

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