

عنوان مقاله:

Determination of components and in vitro antistreptococcal properties of *Mentha piperita* L., *Satureja khuzistanica* Jamzad, *Matricaria recutita* L., *Zataria multiflora* Boiss. and *Rosmarinus officinalis* L. hydroethanolic extracts

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خلاصه مقاله:

Streptococcosis is an infectious disease with significant economic and sanitary repercussions for trout farms in the world. The objective of this study was characterize the chemical constituents and in vitro antibacterial properties of *Mentha piperita* L., *Satureja khuzistanica* Jamzad, *Matricaria recutita* L., *Zataria multiflora* Boiss and *Rosmarinus officinalis* L. extracts against streptococcus iniae. The chemical components of the selected hydroalcoholic extracts were also analyzed by GC/MS. The most constituents were menthol (24%) in the *M. piperita* L., carvacrol (85.88%) in the *S. khuzistanica* Jamzad, guaiazulene (25.6%) in the *M. recutita* L. carvacrol (51.12%) in the *Z. multiflora* Boiss and α -pinene (12.5%) in the *R. officinalis* L. Among plant extracts under study *Z. multiflora* had the lowest MIC (4.896 mg ml⁻¹) and MBC (9.792 mg ml⁻¹) and the maximum MIC and MBC were belonged to *M. piperita* (18.55 mg ml⁻¹) and *R. officinalis* (33.645 mg ml⁻¹) respectively. Also, the inhibition zone diameter of bacteria had determined by disc diffusion method and compared to erythromycin. The highest and the lowest Inhibition zone diameter were belonged to *Z. multiflora* (14.43±0.55 mm) and *M. recutita* (13.23±0.35 mm) respectively. Results showed that *Z. multiflora* extract exhibited highest antibacterial effect against *S. iniae* among all plant extracts in this study.

کلمات کلیدی:

Herbal extracts, Antistreptococcal property, Minimum inhibitory concentration, Minimum bactericidal concentration

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