



CHEMICAL COMPOSITION OF ESSENTIAL OILS FROM PANTELLERIA ISLAND AUTOCHTHONOUS AND NATURALIZED SPICES AND EVALUATION OF THEIR INDIVIDUAL AND COMBINED ANTIMICROBIAL ACTIVITIES

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ABSTRACT

In this study, the antimicrobial activity of the essential oils (EOs) from *Origanum majorana* L. and *Rosmarinus officinalis* L. growing in Pantelleria (Sicily, Italy) were tested alone and in combination against some prokaryotic and eukaryotic food-borne pathogens. The chemical composition of the EOs as well as the minimum inhibitory concentrations (MIC) against the most sensitive strains were also determined. Both EOs showed interesting antimicrobial effects against all bacteria and yeasts tested. MIC was in the range 1.25–2.50 µl/ml. Interestingly, *O. majorana* was particularly rich in thymol acetate, while carvacrol was present at very low percentages. Also *R. officinalis* EOs composition was different from rosemary collected in different areas, as being particularly rich in caryophyllene. Furthermore, the antimicrobial activity of the combination of *O. majorana* and *R. officinalis* EOs indicated their potential as food biopreservatives.
