

عنوان مقاله:

(Toxicity and Repellency Effects of Three Essential Oils against Tetranychus urticae Koch (Acari: Tetranychidae)

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خلاصه مقاله:

Two-spotted spider mite, *Tetranychus urticae* Koch (Acari: Tetranychidae), is one of the most injurious pests of fruits, vegetables and ornamental plants worldwide, both outdoor and indoors. Currently the main method of control of this pest is through application of pesticides which is mostly accompanied by the resistance of the pest against pesticide(s). The resurgence of resistant mite populations brings about further contamination of foodstuff and environment. Essential oils obtained from the aerial parts of plants may have the potential to be an alternative to synthetic pesticides, since they have been demonstrated to possess a wide range of bioactivities against insects and mites. So, the aim of the current study was to investigate the effect of essential oils extracted from three different medicinal plants namely: *Mentha longifolia*, *Salvia officinalis* (both Lamiaceae) and *Myrtus communis* (Myrtaceae) against *T. urticae*. The LC_{50} values of essential oils of *M. longifolia*, *M. communis*, and *S. officinalis* against *T. urticae* were ۲۰.۰۸، ۵۳.۲۲، ۶۰.۹۳ μ l L⁻¹ air, respectively. This shows that *M. longifolia* possesses the highest lethal activity whereas *S. officinalis* the lowest. Also, essential oils of *M. longifolia*, *M. communis*, and *S. officinalis* were demonstrated to possess repellency effect with ED_{50} s of ۱۴۷.۴۷، ۱۳۸.۸۰ and ۱۶۴.۴۱، μ l L⁻¹ air, respectively. These data suggest that essential oils of all the three plants have the potential to be employed in the pest management programs designed for a control of *T. urticae* under greenhouse conditions.

کلمات کلیدی:

Essential oils, Medicinal plants, *Tetranychus urticae*

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