



REPELLENT ACTIVITY OF ESSENTIAL OIL FROM *Zanthoxylum riedelianum* FRUIT AGAINST *Bemisia tabaci* BIOTYPE B

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Bemisia tabaci (Gennadius) biotype B (Hemiptera: Aleyrodidae) is an agricultural pest found in many regions of Brazil, infecting several plants such as tomato, broccoli, cotton, beans and soybean [1]. Unfortunately its control is not very effective because this insect is a plant sap feeding localized on the abaxial surface of leaves from the host plant, releasing a waxy residue which prevents chemical penetration. Accordingly; due to the rapid development of resistance associated with fungi and virus development, the control of this pest requires the application of high doses of insecticide, which causes environmental damage [2]. Natural products have been demonstrated to be one promising sources for the development of alternative methods for pest control, thus minimizing environmental problems in addition to being more selective and specific [3]. In this context, the present study sought to evaluate the effect of essential oils from *Zanthoxylum riedelianum* fruit on *B. tabaci* biotype B. Hydrodistillation of *Z. riedelianum* fruit yielded essential oils with average yields of 0.21%. The chromatography analysis (CG-MS) of the essential oils from *Z. riedelianum* fruit indicated that the main components were: Sabinene (55.94%); D-Germacrene (17.12%) and β -Mircene (8.03%). The essentials oils from *Z. riedelianum* fruit were evaluated at different concentrations 0.0, 0.2, 0.5, 1.0 and 1.5 % against *B. tabaci* biotype B on tomato seedlings for 16 days. Whole plant egg and nymph counts were taken of the 4 in 4 days after the introduction of whitefly adults. The Tween 80 (1%) and Tiger ® (1%) were used as controls. Two different assays were performed: with choice and without choice, where insects were released within voil tissue bags. The study was repeated 5 times. The best results were observed for concentrations of 1.5% and 1.0% with reductions in egg-laying of approximately 85%. The results suggest that the essential oils from *Z. riedelianum* fruit have the potential to be used to control *B. tabaci*.

References:

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