



Preliminary tests of the acaricide activity of essential oil from *Ruta graveolens* L. and *Ocimum gratissimum* L.

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Ruta graveolens L., Rutaceae is an aromatic species characterized by pentamerous flowers, radial symmetry and rarely zygomorphic. The main components of its essential oil are methylheptylketone (90%), methylnonylcarbinol (10%), methylnonyl-alcohols, esters, phenols and terpene compounds. Other aromatic species is *Ocimum gratissimum* L. that can reach one meter in height, with essential oil composed of eugenol, methyl eugenol, linalool, cineol and alpha-terpineol (1). The acaricidal activity of many essential oils is already recognized and the house dust mite is the major trigger of allergies due to its waste and remains of dead mites which have a cysteine protease homologous to papain, named Der p1 (2). The goal of this work is to evaluate the acaricide activity of the essential oils from *R. graveolens* and *O. gratissimum*. *R. graveolens* was donated by the Center for Agroecology Paranaense (CPRA) and *O. gratissimum* was acquired from a private plantation in Itapetininga (SP). The methodology of steam distillation was used to obtain essential oil from dry leaves through the Clevenger apparatus. Dust mites and house dust mite of the genus *Dermatophagoides pteronyssinus* were collected with a vacuum cleaner and posteriorly cultured in Petri dish containing brewer's yeast. They were kept at room temperature and humidity controlled for two years. The acaricidal activity was made by direct test with the oil of both plants evaluated without dilution, the negative control (alcohol 70%) and the positive control (commercial acaricide - ADF Solution Plus). Readings were made at 24, 36, 42 and 96 hours. The results were subjected to evaluation of statistic variance (ANOVA) and Tukey post test ($p < 0.05$). From the results it can be concluded that the first 24 hours the essential oil of *O. gratissimum* did not provide an acaricide activity greater than the positive control, but between 48 and 72 hours both species showed a higher activity than the positive control, which is highly significant. Thus, we can conclude that essential oils of *R. graveolens* and *O. gratissimum* are potential miticides, but other tests should be performed to confirm the acaricide activity.

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2. Collof, M.J. Dust Mites. 2009, 1st ed., 273-310.

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