

Biocidal effects of grapefruit essential oil (*Citrus maxima*) on the latest stages of *Tuta absoluta* tomato mineuse (MEYRICK, 1917)

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Abstract

Background and aim: Since the introduction of the microlepidopter *Tuta absoluta* in Algeria, tomato crops in the fields and especially in greenhouses have suffered colossal losses as a result of the pest's damage. The fight against tomato leafminer sometimes requires the use of chemical insecticides that are harmful to the environment and to human health. Several alternatives of struggle are reaped against this insect.

Methods: During this experiment carried out in the laboratory, the L3 and L4 larvae of *Tuta absoluta* are distributed in batches of 10 individuals, subjected to inhalation of the essential oil of grapefruit, in different doses. A control group was not exposed to any treatment.

Results: The results obtained show us that all the larvae of the L3 and L4 stages are dead and this, after a few hours of exposure to the different doses of the essential oil of the grapefruit.

Conclusion: The use of this essential oil has proved very effective against the larvae of the last stages of *T. absoluta*.

Key words: *Tuta absoluta*, *Lycopersicon esculentum*, larvae, *Citrus maxima*, tomato crop.