

## Abstract

Greenhouse white fly is an important insect pest in green houses. In the recent years, the use of herbal compounds has been proposed as one of the alternative sources to chemical control of insect pests, because of selectivity, divisibility into non-toxic compounds and low impacts on non-targeted organisms and the environment. In this research, the insecticidal effect of leaves ethanol extract of *Calotropis procera*, *Datura stramonium*, *Prosopis juliflora*, *Acacia nilotica* and *Rhazya stricta* on eggs, nymphs and pupae of *Trialeurodes vaporariorum* have been studied in a completely randomized design under laboratory conditions. Leaf-dip bioassay for 5 seconds, used to assess mortalities. Tested individuals (various life stages) were considered dead if they were dark and black after 24 hr. The mortality increased significantly with rising concentrations. LC<sub>50</sub> (Lethal concentration of 50% mortality) of *Rhazya stricta*, *Calotropis procera*, *Datura stramonium*, *Acacia nilotica* and *Prosopis juliflora* calculated 4685, 8824, 12313, 21836 and 31170 mg/l (ppm) for eggs, 4667, 7915, 11165, 20875 and 28288 ppm for 2 nd-instar nymphs and 5483, 10368, 14673, 25399 and 36447 ppm for fourth instar nymphs, respectively. Little mortality was observed in the pupae. The bioassay test showing that the *Rhazya stricta* was the most toxic plant for *T. vaporariorum*.

Keywords: *Acacia nilotica*, *Calotropis procera*, *Datura stramonium*, *Prosopis juliflora*, *Rhazya*, Greenhouse white fly, Plant extract



University of Zabol  
Graduate school  
Faculty of Agriculture  
Department of Plant Protection

**The Thesis Submitted for The Degree of M .Sc  
(in The field of Agricultural Entomology)**

**Effect of ethanol extract of *Calotropis procera*,  
*Datura stramonium*, *Prosopis juliflora*, *Acacia  
nilotica* and *Rhazya stricta* on control of  
*Trialeurodes vaporariorum***

**Supervisor:**

Dr. A. Khani

Dr.S.S.Modares Najaf Abadi

**Advisors:**

Dr. N. Sahebzadeh

**By:**

Elham Arefnia

january  
2018