

**Abstract of the DVM thesis No:12489, Faculty of Veterinary Medicine, Urmia University,
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Title of thesis: Investigation of effect of green tea (*Camellia sinensis*) and Jujube (*Ziziphus vulgaris*) extracts on *Varroa destructor*

Abstract:

Varroa destructor is one of the most important pests of honey bee (*Apis mellifera*) throughout the world and Iran which is an economically important infestation of honey bee production industry. Recently, pesticides application against *V. destructor* caused drug resistance and accumulation of chemical residues in honey bee productions. For this reason, the present study was carried out to evaluate the effect of oak (*Quercus infectoria*) and carob (*Ceratonia siliqua*) extracts on *V. destructor* in parallel with Apistan. This investigation was carried out to evaluate effects of three concentration of the green tea and Jujube extracts in three replications on the *V. destructor* under laboratory condition. In control group, mites were dipped in distillate water. Twenty adult mites were used for each treatment. In an infested apiary, three groups (three hives with average of 3 mites per 20 honey bees for each hive) were chosen to evaluate basic concentration of green tea and Jujube extracts (2.5%) in comparison with Apistan and control groups. The adult mite mortality for the three concentration of 1, 2, 3% was respectively recorded as 14.35%, 65.77%, and 98.84 for green tea and 8.48%, 49.81%, and 90.43% , for Jujube extract. There was significant effect between green tea and Jujube extracts in treatment and control group. The highest effect of green tea and Jujube extracts and Apistan on *V. destructor* was found in 36 (36.41%), 48(34.73%) and 24 (47.54%) hours, respectively. It was concluded that green tea and Jujube extracts had lethal effect on *V. destructor* infestation in honey bees.

Key words: green tea (*Camellia sinensis*), Jujube (*Ziziphus vulgaris*), *Varroa destructor*, Apistan, Honey bee.