

Original Paper

Repelling property of the methalonic and hexanic extracts of *Sambucus ebulus L.* against the *Culex pipiens*: in-vitro study

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Abstract

Background and Objective: The anti inflammatory, analgesic, antioxidant of *Sambucus ebulus L.* have been reported in several studies. This study was done to assess the repelling property of the methalonic and hexanic extracts of *Sambucus ebulus L.* against the *Culex pipiens*.

Methods: In this experimental study, *Sambucus ebulus L.* collected from the natural inhabitants of Mazandran province in northern Iran. Methalonic and hexanic extraction were provided from the leaf and fruit of *Sambucus ebulus L.* Concentration of 50 mg/kg, 100 mg/kg and 250 mg/kg was prepared. 0.4 ml of the extract prepared and was spread on the albino skin area of 4×6 cm². After 30 minutes the number of the mosquito (*Culex pipiens*) bites on the skin was recorded. N, Ndiethyl-3 methyl benzamide was considered as positive control.

Results: The highest repelling property of the *Sambucus ebulus L.* belonged to the concentration of 250 mg/kg of leaf and fruit extraction. The highest repelling effect was 80% and 66.8% for leaf methalonic and hexanic extract, respectively. The highest repelling effect was 84% and 72% for fruit metalonic and hexanic extract, respectively (P<0.05).

Conclusion: The methalonic extract of *Sambucus ebulus L.* had higher repelling efficiency compared to the hexanic extract. The fruit extract also had better effect than the leaf extract.

Keywords: *Sambucus ebulus L.*, *Culex pipiens*, Insect repellent

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