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