Abstract
Toxoplasma gondii is an obligatory intracellular parasite that infects a wide range of warm blooded animals and humans. Considering the severity of toxoplasmosis, side effects of current treatments, and the contribution of the ethnopharmacological knowledge for the treatment of parasitic infections, the aim of the present study was to investigate the efficacy of methanolic extracts from the fruits and leaves of Sambucus nigra against tachyzoite of T. gondii. For this, fruits and leaves of S. nigra were collected from Mazandaran province, Iran, were dried under the shade, and powdered using a commercial electrical blender. For extractions, methanol was used as solvent. virulent RH strain of T. gondii was maintained in mice and macrophages containing tachyzoites were aspirated from the peritoneal cavity. Four concentrations (5, 10, 25 and 50mg/mL) of S. nigra extract were incubated with infected macrophages for 30, 60, 120 and 180 minutes and the viability of the tachyzoites were evaluated by trypan blue staining. Results showed that S. nigra fruit extracts at the concentrations of 5 and 10mg/mL killed 100% of T. gondii tachyzoites after 60 and 120 minutes, respectively; and concentrations of 25 and 50mg/mL killed 100% of the tachyzoites after 30 minutes. Additionally, extract of S. nigra leaves, at the concentrations of 5, 10 and 25mg/mL after 180 minutes, and concentration of 50mg/mL after 60 minutes, resulted with the highest efficacy. Our results showed that S. nigra has acceptable efficacy in vitro and the parasiticidal effect of fruit extract was significantly better than leaf extract. However, in vivo efficacy of this extract needs further investigation. Rev. Biol. Trop. 63 (1): 7-12. Epub 2015 March 01.

Keywords
Anti Toxoplasma, Sambucus nigra, Toxoplasma gondii, methanolic extract, in vitro.