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IN VITRO STERILIZATION OF PERSIAN IRONWOOD (PARROTIA PERSICA) BY NANO SILVER AND SODIUM HYPOCHLORITE

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One of the native ornamental trees distributed along the Caspian Sea in Northern provinces of Iran is *Parrotia persica*. Its red stamens appear before the leaves in spring, while asymmetrical glabrous leaves with pink-bronze margins flourish in summer. Persian ironwood shows outstanding colorful leaves in fall and mosaic cream-grey flaking trunks in winter. Due to widespread deterioration of its habitat, an initial step of micropropagation was investigated for this plant. *In vitro* sterilization treatments were examined to conserve this precious ornamental plant. The effect of sodium hypochlorite (0, 0.5, 0.75 and 1% for 10, 15 and 20 minutes) and Nano silver (0, 100, 200 and 400 mg/l) were studied on nodal explants in the WPM medium. The highest fungal control and survival rate of 93.75% was recorded by using 0.75 sodium hypochlorite for 20 min. Furthermore, disinfection by 200 mg/l Nano silver resulted in 93.75% bacterial control and survival rate, which would be beneficial for later proliferation stages of this plant.

Keywords: Aseptic culture, disinfection, micropropagation, Persian ironwood, Parrotia persica.