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## Investigation of the Effectiveness of Silver Nano Particle for Controlling the Box (Buxus Sp) Powdery Mildew

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### Abstract

The antifungal effectiveness against box powdery mildew using antimicrobial silver nanoparticles was investigated. Commercial brand of Silver (nanonaspars COM, Iran) nanoparticle were prepared before use, size particle and stability were investigated by UV-vis spectrophotometer and Scanning Tunneling Microscope (STM). The silver nanoparticles of concentration of 4000 ppm was diluted in 50, 100, 200, 500 ppm and sprayed at box plant which was polluted by powdery mildew in Ferdowsi university campus. The laboratory tests consist of cut branch which was cultured in the vial containing perlite and mentioned dosage of silver nano particles. The antifungal effects were observed by an optical microscope. Plants were investigated for one month after treatment. We don't see any remarkable reduce of disease in plant, as opposed to other papers that showed its effectiveness at low dosages for controlling the powder mildew. Our hypothesis for this variation related to the sensitivity of silver nano particles to conditions and materials at field. It is necessary that new formulation for silver nanoparticles be studied for agricultural usage.

**Keywords:** Silver Nanoparticles, Powdery Mildew, Box, Formulation



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