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STUDY ABILITY OF WILD *T.VIRIDE* COMPARED WITH MUTANT STRAINS FOR PRODUCTION NANOSILVER PARTICLES AND EFFECT ON SEED GERMINATION

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1-ABSTRACT

The present work investigates the synthesis of silver nanoparticles using wild *Trichoderma viride* strain and induced mutant strain to compartment with each other. The cell filtrate of T. viride was used for the reduction of silver nitrate to silver nanoparticles. the results showed that success the wild and tow mutant strains that coded T. viride Fat13 and T. viride Has15 it were abile to synthesize nano silver particles. The results showed that the summit was the absorption after 12 hours in the mutant strain T. viride Has15 its have highest absoription band it was (0.674) followed by T. viride Fat 13 (0.6120) after 20 hours too, while in wild T. viride strain it was (0.511) after 72 hours and The durable surface plasmon resonance centered at ca. 412-420 nm, TEM micrograph providing comprehensive morphology of silver nanoparticles, The morphology of the nanoparticles is highly variable. Under observation of such images, these assemblies were found to be aggregates of silver nanoparticles in the size range 5–50 nm prouduced from T. viride Has15, while it was in the size range 6-60 and 8-80 in wild strain. The attained data refer to obviously revealed that experience to AgNPs had unimportant effect on seed germination as associated to the control treatment. representative that the engineered particles not posture any toxicological properties to the seeds throughout the germination so the germination rate was not pretentious.

KEYWORDS: T. viride, mutant, Transmission electron microscope, seed germination, Silver nanoparticles synthesis.