
EFFECT OF TEMPERATURE ON GREEN SYNTHESIS OF SILVER NANOPARTICLES USING *VITEX AGNUS-CASTUS* EXTRACT

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Abstract. The *Vitex agnus-castus* leaves extract has been used for green synthesis of silver nanoparticles. The effect of the temperature on both silver ions reduction and silver nanoparticles formation was investigated. It was found that fast reduction of silver ions occurs even at 40°C, while effective synthesis of silver nanoparticles requires elevated temperatures of 60-80°C. It is concluded that the extract contains both strong reducing and effective stabilizing agents that provide rapid reduction of silver ions and hinder the fast particles growth, respectively.

Keywords: nanoparticle, silver, *Vitex agnus-castus* extract, green synthesis.