



Essential Oil of Wild Marigold Induces Oxidative Stress in *Senna occidentalis*

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Abstract: *Tagetes minuta* L., commonly known as wild marigold is an aromatic weed belonging to family Asteraceae. The plant has naturalized more than 35 countries because of its noxious habit which may be attributed to rich phytochemistry of volatile essential oil. Hence present study was undertaken to extract essential oil from aerial parts of wild marigold and find out its effect on germination, early growth and stress related parameters. The test weed selected for the biochemical assessment was *Senna occidentalis* (L.) Link, a wasteland weed, flourishing well in almost every region of world. Growth studies under laboratory conditions showed significant inhibition of *S. occidentalis* by *T. minuta* oil. Simultaneously, an increase in hydrogen peroxide content, lipid peroxidation and proline content were also observed in root as well as leaf tissues of treated seedlings. Thus, it confirmed the allelopathic inhibition of test weed due to stress induced by essential oil of wild marigold.

Keywords: Wild marigold, *Senna occidentalis*, Essential oil, Oxidative stress
