

Research article

Evaluation of H₂O₂ radical scavenging activity, phenolic and flavonoid content of the formulated beverage made from *T. erecta* L.

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Key words: *Tagetes erecta*, Activity, H₂O₂ scavenging assay, Flavonoid, Quercetin.

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Abstract

Tagetes erecta, the Mexican marigold, also called Aztec marigold, is a species of the genus *Tagetes* native to Mexico. Despite its being native to the Americas, it is often called African marigold. It is well known for its antimicrobial, antiseptic, wound and ulcer healing, anti-inflammatory, antioxidant and antiviral properties, and it has a long history of being used as an herbal remedy. *T. erecta* produces a variety of substances that possess pharmacological effects and antioxidant activity. The present study aims to analyze the antioxidant property of a beverage made of dried *T. erecta* L. flowers petals, cultivated in West Bengal, India. Radical scavenging potential was determined using H₂O₂ (Hydrogen peroxide) scavenging assay, which showed that with increase in concentration of the sample, the % of inhibition also increased. The total flavonoid content of the residue left after filtering the beverage, made from dried and processed *Tagetes* flower was found to be 530.32 µg/g dry weight, using a standard curve of quercetin. Furthermore, the total phenolic content of the same was estimated, taking a standard curve of Gallic acid, and was calculated to be 78.31 µg GAE/ g of dry sample. This study suggests that the flowers of *Tagetes erecta* L. are the possible sources of natural radical scavengers. Thus black tea leaves could be used as natural antioxidants in the beverage, food and pharmaceutical industries that need further wide range *in vivo* studies.
