

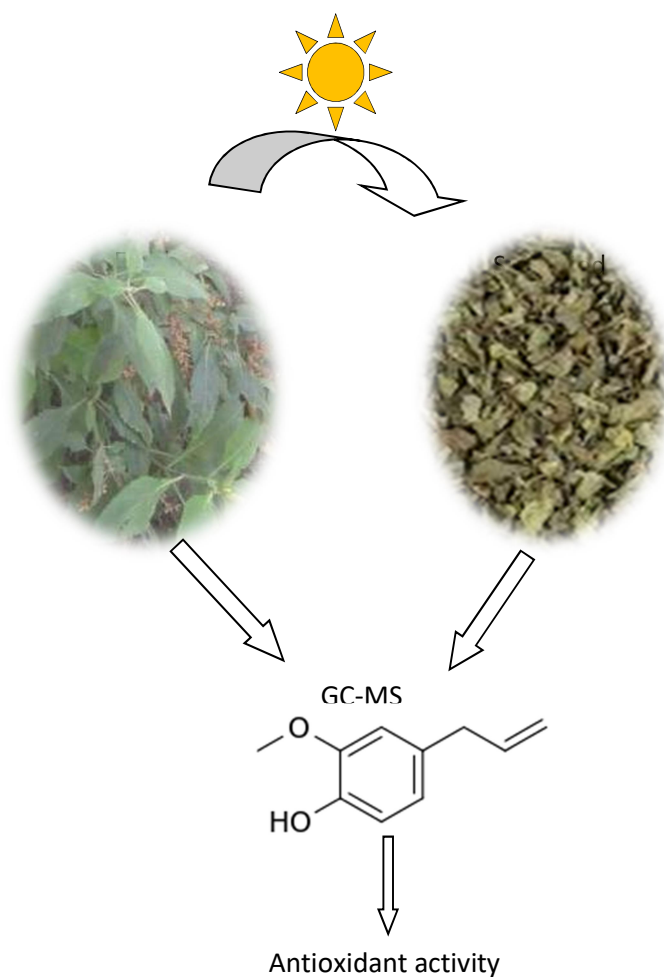
Evaluation of Antioxidant Potential and Quality of Volatile Constituents of Fresh and Sun Dried *Ocimum gratissimum*

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Abstract: *Ocimum gratissimum* (family Lamiaceae), is an aromatic herbaceous plant which is native to tropical countries especially India and West Africa. It has been traditionally used for

medicinal, condiment and culinary purpose. Fresh leaves of *Ocimum gratissimum* were collected from the cultivated field of Haldwani (Uttarakhand), India at full blooming stage. The leaves of *Ocimum gratissimum* were hydrodistilled and analysed immediately after collection and after sun drying to evaluate the quality of volatile constituents in terms of composition by GC and GC-MS and antioxidant activity by 2, 2'-Diphenyl-1-picrylhydrazyl (DPPH) radical scavenging activity. **Duncan and paired t-test were performed to evaluate the difference between drying treatments using SPSS 16.0 and MS excel respectively.** The fresh oil had a very high amount of eugenol (72.70%) and sun drying resulted in significant decrease ($p < 0.01$) in the percentage of this constituent (17.31%). Drying caused complete loss of three volatile constituents with appearance of sixteen compounds. Fresh oil showed better DPPH radical scavenging activity as compared to the sun dried oil.

Keywords: *Ocimum gratissimum*, Lamiaceae, eugenol, (*E*)- β -ocimene, drying, antioxidant activity