

UGC - Minor Research Project

Qualitative and Quantitative analysis of Eugenol and Methyleugenol in

Ocimum sanctum Linn

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Summary of Project

Ocimum sanctum L is a rich source of essential oil. The present investigation attempts to isolate mutants with increase in oil, eugenol and methyleugenol content and to see the stability of mutant characters.

The mutants obtained in M₂ and M₃ population were raised for the mutant population, for getting seed samples for analysis of oil (Eugenol and Methyleugenol). The plants were randomly selected from each mutant population. The mutant population has shown the alteration in oil content and amount of eugenol and methyleugenol. In control seeds, the oil content varied between 14.8 to 16.9% and eugenol and methyleugenol content from 50 to 63% and 17 to 19% respectively. All the mutagen population were shown the variability in total oil, eugenol and methyleugenol contents.

From the mutant population, the maximum of 69.02% eugenol was recorded in mutant number 11.5.3.7. These mutants were isolated in EMS treated M3 population. The maximum methyleugenol was found in 22.00% in mutant number PN 6.9.1, PN 6.9.7 and PN 6.9.13. The mutant population have shown increase in oil, eugenol and methyleugenol content and the stability of the character was maintained.

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