
CHEMISTRY AND BIOLOGICAL ACTIVITIES OF *MARRUBIUM* ESSENTIAL OIL'S: A REVIEW

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Abstract. This paper aimed to overview the essential oil of *Marrubium* species (except *M. vulgare*) described until now regarding extraction, chemical composition and biological activities. There are a few studies concerning the essential oil isolated from *Marrubium* species, seventeen of which are elucidated. Those that exist are much more related to chemical characterization and identification of essential oils components. All *Marrubium* species studied were subjected for distillation method. Belonging to *Labiatae* family, *Marrubium* genus with tricolpate pollen is oil-poor one. The obtained oil varied from 0.01 to 0.91% yield. The essential oil in this genus mainly consists of sesquiterpenoids such as germacrene D, β -caryophyllene, spathulenol. Monoterpenes were presented in appreciable or in trace amounts. Both types of terpenoids were characterized by the predominance of hydrocarbon fractions with some differences according to plant species. And sometimes volatile phenylpropanoids such as eugenol and its derivative methyl eugenol were also presented, occasionally with considerable amount. This composition varies from one species to another and sometimes within the same species. The literature of biological activities of essential oils of *Marrubium* genus is scarce. The studies concerning this aspect are little and are essentially related to antimicrobial or antioxidant activities. Anticholinesterase and ocular allergy properties are also investigated.

Keywords: antimicrobial, antioxidant, composition, essential oil, *Marrubium* sp.