MICROWAVE ASSISTED SYNTHESIS AND FRAGRANCE PROPERTIES OF HETEROCYCLIC ANALOGUES OF JASMONE

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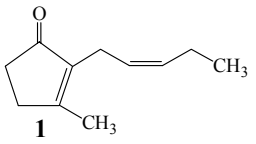
cis-Jasmone **1** and methyl jasmonate **2**, belong to jasmonoids group, are 2,3-disubstituted, five-membered cyclic ketones. They are the most important representatives of natural jasmine fragrances which were isolated from jasmine flowers. Jasmonoids not only exhibit characteristic fragrance properties but also play a key role as phytohormones in plants.



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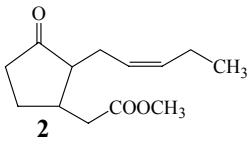
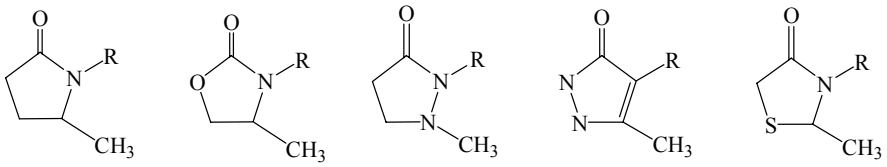


2

In the present investigation, microwave assisted synthesis and olfactory properties of some heterocyclic analogues of jasmone were described. New analogues are based on heterocycles with carbonyl function e.g. oxazolidinone, pyrrolidinone, pyrazolidinone, pyrazolinone and thiazolidinone cycles. Almost all compounds were successfully prepared under microwave irradiation and the results of those microwave accelerated syntheses were compared with classical, thermally initiated reactions in solvent. Preparation of heterocyclic compounds was performed in two steps: condensation and/or alkylation, which were conducted according to two alternative microwave procedures, without solvent (solvent-free conditions) or with small amount of polar, ecological friendly solvent e.g. ethanol. Reactions under microwave irradiation were more efficient and much faster.



R = -*n*-pentyl or -*n*-2-pentynyl

Many of obtained compounds have shown interesting and specific odor which had similar, but essentially different, note to floral, typical jasmine odor of *cis*-jasmone.