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Oxidative aromatization of some 1,4-dihydropyridines with potassium permanganate supported on alumina under microwave irradiation

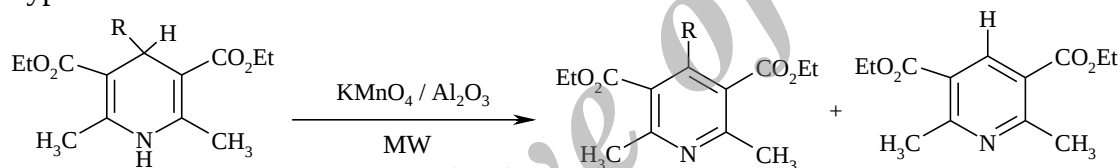
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1,4-Dihydropyridines (DHPs) are very interesting compounds due to their pharmacological and biological properties [1]. The oxidation of dihydropyridines provides an efficient access to the corresponding pyridines. It is important to study the oxidation of 1,4-dihydropyridine derivatives, because the treatment of hypertension proceeds through the oxidation of 1,4-dihydropyridines [2, 3].

In Connection with our previous work on the chemistry of 1,4-dihydropyridines [4,5], we wish to report the results obtained from a study of the oxidation of some 1,4-dihydropyridines with potassium permanganate absorbed on the very inexpensive and readily available support, Al_2O_3 under solvent free conditions. This procedure gives products in good yields. We have also investigated the oxidation of these compounds using cited reagents under microwave irradiation. We have observed that the type of formed products under both conditions (with and without microwave) is the same; however the reaction is accelerated under microwave irradiation. We have also investigated the effect of the type and nature of the 4-substituents.



References

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