

SYNTHESIS OF SPIROHYDANTOIN DERIVATIVES BASED ON ALIPHATIC KETONES AND THEIR CHEMICAL PROPERTIES INVESTIGATION

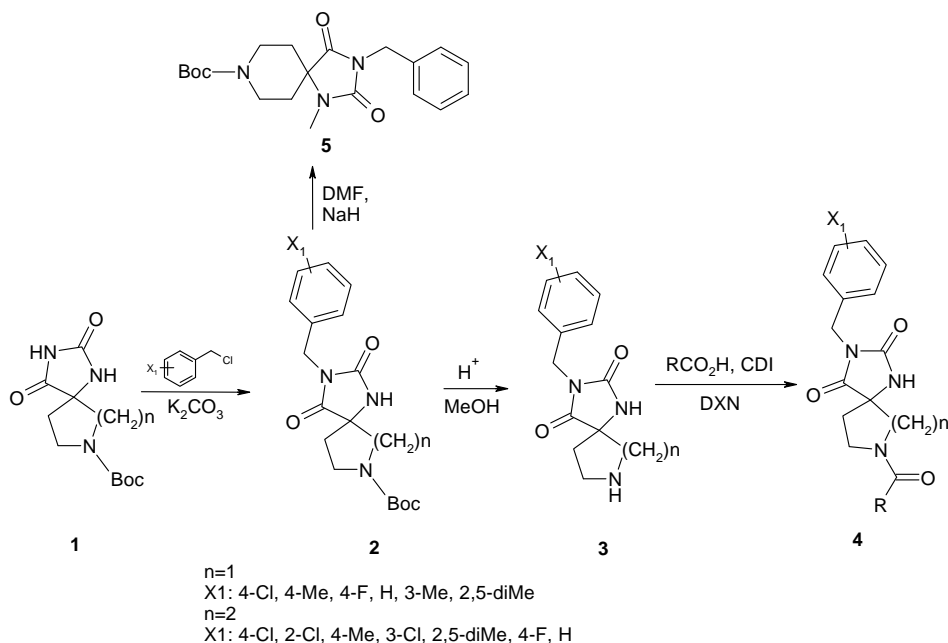
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In the two last decades it was found, that hydantoins have great range of therapeutic effects. They can be used as anticonvulsants, antagonists of 5-HT receptors, inhibitors of platelet aggregation, antiarrhythmic, antiviral, antihypertensive agents etc. There are many works, devoted to application of spirohydantoins as stabilizers for production of macromolecular compounds. Considering a wide range of practical use we have synthesized the starting spirohydantoins based on 3-N-Boc-pyrrolidone and 4-N-Boc-piperidone (on a scheme $n=1$ and $n=2$ respectively) and their nitrogen atoms reactivity in alkylation and acylation reactions has been investigated.

^1H NMR spectra of all pyrrolidine ranges compounds contain the signals near 1.37 and 1.95 ppm, produced by protons of methylene-group in position 9. Such non-equivalence may be explained by the different spatial arrangement of these protons. Probably the signal of that proton which is close to carbonyl-group is shifted downfield.



As the result of this work the ranges of new compounds were obtained. Most of them were not reported before. The structures of all of these compounds were confirmed by LCMS, ^1H NMR- and ^{13}C NMR spectroscopic methods.