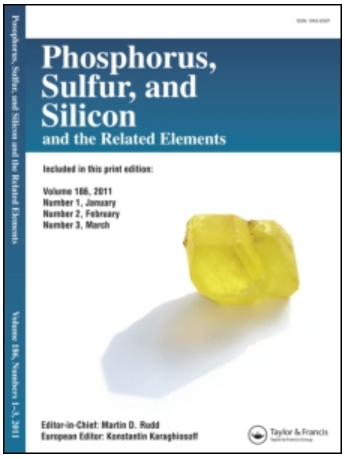

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Unsaturated Analogues of Phosphorylcholines

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Unsaturated Analogues of Phosphorylcholines

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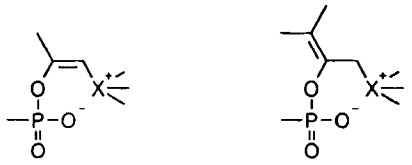
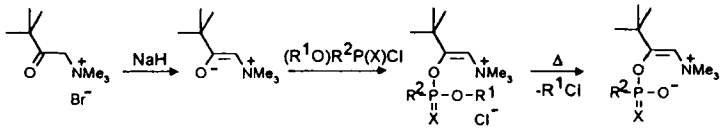
Keywords: amino ketone; phosphorylcholine; betaine

The vinyl esters of phosphorus acids, containing onium group in β-position, for example, betaines type A and B (X = N, P), have a number of features, attracting to them significant attention of researchers.[1] First of all, these compounds are interesting as examples of hydrolytically stable inhibitors of acetylcholinesteraze, posessing complex action.



A B

The literature information, however, deal only with β-ammoniummethyl derivatives of B type. The phosphorus-containing quarternary ene-ammonium salts and corresponding betaines of A type (X = N) remained unknown until now. We have found that such betaines can be readily obtained by phosphorylation of nitrogen ylides stabilized by carbonyl group.[2]



I II III IV

R^1 = Me, Et. R^2 = Me, EtO. X = S, O.

Originally, during reaction of betaines (II) with chloroanhydrides of phosphorus acids ene-ammonium derivatives (III) are formed, which on heating in acetonitrile or methylethylketone, or spontaneously, upon long standing, turn into betaines (IV) trough dealkylation. According to NMR spectra, the reaction proceeds stereospecifically, with formation of one out of possible Z-E-isomers.

References

[1] Yu.G. Gololobov, A.S. Oganesyan, L.V. Kasukhin. *Doklady Akad. Nauk USSR,* **Vol. 314,** N 3, pp. 632–636, (1990).

[2] S.E. Pipko, Yu.V. Balitsky, A.D. Sinitsa, Yu.G. Gololobov. *Zhurn. Obsch. Khim.,* **Vol.67,** N 3, pp. 517–518, (1997).