THE REACTION OF PHOSPHORYLATION OF TRANS-ACONITIC ACID BY TERTIARY PHOSPHINES

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A wide series of phosphabetaines has been obtained in reactions of tertiary phosphines with unsaturated mono- and dicarboxylic acids [1]. Herein, we report the phosphorylation of *trans*-aconitic acid by tertiary phosphines. The reactions proceeded with the decarboxylation and formation of the corresponding carboxylate phosphabetaines in good yield. The betaines structure was confirmed by a set of spectral methods and X-ray structure analysis.

$$C_{e}H_{5} \longrightarrow \begin{matrix} C_{e}H_{5} \\ R \end{matrix} + \begin{matrix} HOOC \\ H_{2} \end{matrix} \longrightarrow \begin{matrix} COOH \\ H \end{matrix} \longrightarrow \begin{matrix} C_{e}H_{5} \\ CO_{2} \end{matrix} \longrightarrow \begin{matrix} C_{e}H_{5} \\ R \end{matrix}$$

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References:

[1] V.I. Galkin, Yu.V. Bakhtiyarova, R.I. Sagdieva, I.V. Galkina, R.A. Cherkasov Heteroatom Chem., 17, 557 (2006).