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Phosphobetaines on the Basis of Triphenylphosphine and Unsaturated Dicarboxylic Acids

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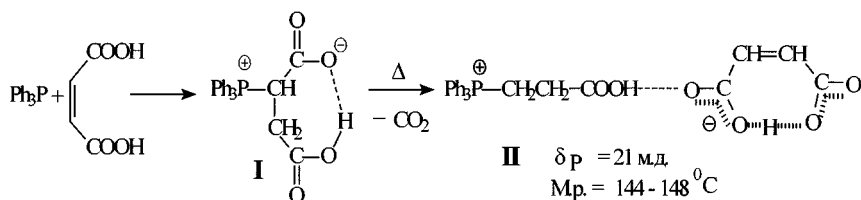
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PHOSPHABETAINES ON THE BASIS OF TRIPHENYLPHOSPHINE AND UNSATURATED DICARBOXYLIC ACIDS

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Toxylic acid reacts with triphenylphosphine under soft conditions to give betaine **I**, which is unstable and under heating or keeping eliminates CO₂ with the formation of phosphonium salt **II**.



SCHEME 1

Reaction of triphenylphosphine with fumaric acid carries out at high temperature only, and in this reaction the previously described triphenylphosphonium ethylcarboxylate, stabilized by the molecule of acetonitrile, has been directly obtained. The structure of all products has been strictly confirmed by the direct method of x-ray analysis.

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