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Reaction of P(III) Organyl Halides with 3,4-Dichloro-5-hydroxy-2(5H)-furanone

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Abstract

Reaction of diphenylchlorophosphine with 3,4-dichloro-5-hydroxy-2(5H)-furanone was used to prepare 3,5-dichloro-4-diphenylphosphinoyl-2(5H)-furanone. The reaction occurs involves nucleophilic substitution of the chlorine β to the carbonyl group and an unusual intermolecular rearrangement. The reaction with diethyl phosphorochloridite takes two routes: The first route is similar to that with diphenylchlorophosphine and the second involves the hydroxyl group.
