

SYNTHESIS OF PHOSPHONATES FROM HETEROAROMATIC CATIONS AND THEIR
USE IN WITTIG-HORNER REACTION : ON ISOQUINOLINE AND QUINOLINE SERIES

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Several kinds of dimethyl 2-acyl-1,2-dihydroisoquinoline-1-phosphonates (1) were synthesized in one pot by treating isoquinoline with the corresponding acyl chloride followed by the addition of trimethyl phosphite and sodium iodide one after another (70-90%). The phosphonate carbanion of 1d reacted with various aldehydes and benzophenone to give 2-isopropoxycarbonyl-1-methylene-1,2-dihydroisoquinolines (2) in good yields (46-87%). The same series of reactions starting from quinoline gave a similar result. Various 1-substituted isoquinolines were obtained in yields of 75-90% by decarboxylation of 2 with hydrochloric acid under mild conditions. These reactions were applied to annelation by intramolecular Wittig reaction, using acyl chlorides containing another carbonyl group at an appropriate position.

