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A Convenient Synthesis of 1-(Dichloro-Pyrimidinyl Carbamyloxy) Alkyl Phosphonates

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A Convenient Synthesis of 1-(Dichloro-Pyrimidinyl Carbamyloxy)Alkyl Phosphonates

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In the study of the nucleophilic addition reaction of dialkyl 1-hydroxyphosphonate and dichloropyrimidinyl isocyanate. We found this reaction was a convenient way for the synthesis of 1-(substituted carbamyloxy)alkyl phosphonate derivative. Dialkyl 1-hydroxyphos-phonate can be easily prepared by addition of dialkylphosphite to carbonyl compounds. 4,6-dicloro-2-isocyanato pyrimidine can be synthesized by the reaction of oxalyl chloride and 2-amino-4,6-dichloropyrimidine which can be obtained from 2-amino-4,6-dihydroxy pyrimidine.

The reaction of dichloropyrimidinyl isocyanate 3 and dialkyl 1-hydroxyphosphonate 4 in dry benzene with stirring at room temperature for 15 min occurs readily to afford the title compounds 5 in 62.0-83.0% yields.

Acknowledgements

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