

## The kabachnik-fields and pudovik reactions on the basis of E,Z-citral and its imines and (R,S)-citronellal

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### Abstract

The Kabachnik-Fields reaction of E,Z-citral with diethyl phosphite in the presence of isobutylamine has been found to form  $\alpha$ -aminophosphonates. The Pudovik reactions of diethyl phosphite with prenyl imines prepared on the basis of E,Z-citral with isobutylamine also allowed us to obtain the same  $\alpha$ -aminophosphonates. We have managed to synthesize  $\alpha$ -aminophosphonates by the reaction of O,O-dialkyl trimethylsilyl phosphites with prenyl imines in the presence of water or diethylamine.  $\alpha$ -Aminophosphonates were also synthesized by the reaction of diethyl phosphite with (R,S)-citronellal in the presence of alkylamines.  $\alpha$ -Aminophosphonates obtained showed bacteriostatic activity against *Staphylococcus aureus* and *Bacillus cereus*. © 2012 Wiley Periodicals, Inc.

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