

INVESTIGATION OF ADDITION REACTIONS OF ORGANOALUMINUM TO ALFA-IMINO PHOSPHONATES

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ABSTRACT

α -Amino phosphonates are close analogs of α -amino carboxylic acids. Syntheses of these compounds by using different methods have been focus of attention in the area of synthetic chemistry and pharmaceutical chemistry. The reason for that is they have wide range of properties such as antibacterial agent, enzyme inhibitor, antibiotic and pharmacological agent and herbicide. In this thesis, first we have synthesized non-commercial α -imino phosphonate derivatives **8**, **10a** and **10b**. Later, we have examined the addition reaction of organoaluminum reagents (Me_3Al and Et_3Al) with different equivalents of reagent, in different solvents (DCM, toluene ve acetonitrile) and at different temperatures. Herein, we have also tested the addition reactions of organozinc reagents- Et_2Zn and Ph_2Zn to α -imino phosphonates **10a** and **10b** in different solvents and at different temperatures. The desired α -amino phosphonates were obtained without the cleavage of C-P bond in good yields.

Keywords: Alfa-iminophosphonate, alfa-aminophosphonate, organoaluminium and organozinc