

Phosphorus, Sulfur and Silicon and the Related Elements 2009 vol.184 N4, pages 865-871

Interaction of vinylphosphonates with 1,2-diaminoethane and ethanolamine

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Abstract

The reaction of 1,2-diaminoethane with vinylphosphonate occurs as the addition of the amino group to the β -carbon atom of the unsaturated substrate to give 1:1 and 1:2 adducts. The nucleophilic addition of 2-aminoethanol at the β -position of the double bond of vinylphosphonates involves only the amino group and leads to the formation of hydroxy β -aminoethylphosphonates or zwitterions depending on conditions.

<http://dx.doi.org/10.1080/10426500802715577>

Keywords

β -aminoethylphosphonates, 1,2-diaminoethane, 2-aminoethanol, Addition, Betains, Vinylphosphonate