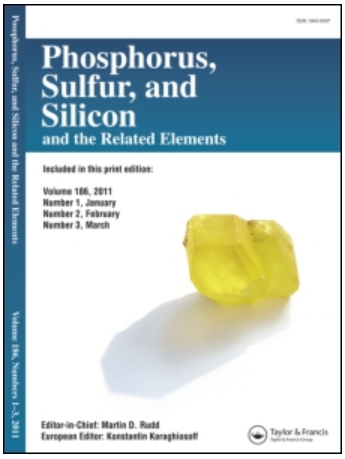

Phosphorus, Sulfur, and Silicon and the Related Elements

Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713618290

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Bogdan Boduszek[a]; Agnieszka Halama[a]
[a] Institute of Organic Chemistry, Biochemistry and Biotechnology, Wroclaw University of Technology, Wroclaw, Poland

To cite this Article Boduszek, Bogdan and Halama, Agnieszka(1999) 'A Cleavage of *O*-Hydroxy and *p*-Hydroxy-1-Aminobenzylphosphonates in a Basic Medium', Phosphorus, Sulfur, and Silicon and the Related Elements, 147: 1, 35
To link to this Article: DOI: 10.1080/10426509908053498
URL: http://dx.doi.org/10.1080/10426509908053498

Phosphorus, Sulfur and Silicon, 1999, Vol. 147, pp. 35-35
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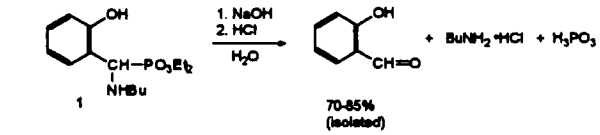
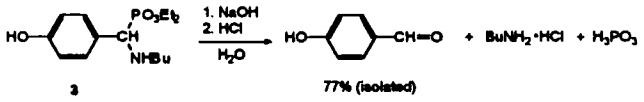
A Cleavage of *O*-Hydroxy and *p*-Hydroxy-1-Aminobenzylphosphonates in a Basic Medium

BOGDAN BODUSZEK and AGNIESZKA HALAMA

Institute of Organic Chemistry, Biochemistry and Biotechnology, Wroclaw University of Technology, 50–370 Wroclaw, Poland

As part of our studies into the synthesis of benzylic aminophosphonates we have found, that hydroxybenzyl(amino)phosphonates underwent a cleavage in strong basic conditions to form aldehydes, amines and phosphorous acid, in high yield.





The cleavage of the aminophosphonates occurred only in the case of the *ortho* and *para* derivatives. The *meta* derivative was not cleaved by the aq. NaOH. Also, the methoxy derivative substituted in *para* position was not affected by aq. sodium hydroxide. A similar cleavage of other aminophosphonates in a basic condition was already described [1], likewise as a cleavage of pyridyl aminophosphonates in a strong mineral acid [2]. It seems that, the main reason for these all cleavages is an ability to ionization (or protonation) of certain groups in basic or acidic solutions, and delocalisation of π-electrons in the molecule, being of a result of a resonance effect, showed by these groups.

References

[1] B. Boduszek, A. Halama and J. Zoń, *Tetrahedron*, **53**, 11399, (1997).
[2] B. Boduszek, *Tetrahedron*, **52**, 12483, (1996).