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## 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>

### A Cleavage of *O*-Hydroxy and *p*-Hydroxy-1-Aminobenzylphosphonates in a Basic Medium

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**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>

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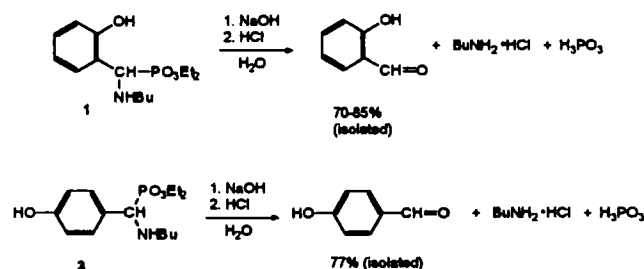
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## A Cleavage of *O*-Hydroxy and *p*-Hydroxy-1-Aminobenzylphosphonates in a Basic Medium

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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  $\pi$ -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).