

This article was downloaded by:

On: 30 January 2011

Access details: *Access Details: Free Access*

Publisher *Taylor & Francis*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



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>

Side Products in Nucleotide Chemistry

Jacques H. Van Boom^a; Otto Dahl^b; John E. Marugg^a; John Nielsen^b

^a Gorlaeus Laboratories, State University of Leiden, Leiden, The Netherlands ^b Department of General and Organic Chemistry, University of Copenhagen, The H. C. ørsted Institute, Copenhagen, Denmark

To cite this Article Van Boom, Jacques H. , Dahl, Otto , Marugg, John E. and Nielsen, John(1987) 'Side Products in Nucleotide Chemistry', Phosphorus, Sulfur, and Silicon and the Related Elements, 30: 3, 819

To link to this Article: DOI: 10.1080/03086648708079309

URL: <http://dx.doi.org/10.1080/03086648708079309>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

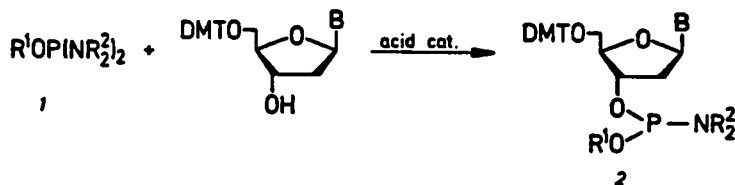
Side Products in Nucleotide Chemistry

Jacques H. van Boom^a, Otto Dahl^b, John E. Marugg^a and John Nielsen^b.

^aGorlaeus Laboratories, State University of Leiden, P. O. Box 9502, 2300 RA Leiden, The Netherlands.

^bDepartment of General and Organic Chemistry, University of Copenhagen, The H. C. Ørsted Institute, Universitetsparken 5, DK-2100 Copenhagen, Denmark.

Alkyl bisaminophosphorodiamidites¹ (**1**) has been shown to be versatile reagents for in situ preparation of d-nucleoside-3'-phosphoramidites^{2,3,4} (**2**).



A series of these alkyl bisaminophosphorodiamidites are shown to phosphitylate heterocyclic positions in the commonly used deoxyribonucleoside derivatives.

A detailed study and structural assignment of these possible site-products are presented.

1. J. Nielsen, J. E. Marugg, J. H. van Boom, J. Honnens, M. Taagaard and O. Dahl, *J. Chem Res. (S)*, **1986**, 26.
2. M. F. Moore and S. L. Beaucage, *J. Org. Chem.* **50**, 2019 (1985)
3. A. D. Barone, J.-Y. Tang and M. H. Caruthers, *Nucleic Acid Res.* **12**, 4051 (1984).
4. J. Nielsen, J. E. Marugg, M. Taagaard, J. H. van Boom and O. Dahl, *Recl. Trav. Chim. Pays-Bas* **105**, 33 (1986).