

This article was downloaded by:

On: 28 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>

Long-Range ^{31}P - ^{31}P Spin Coupling Constants in the ^{31}P NMR Spectra of Phosphite Triesters

Andrew M. Riley^a; Stephen J. Mills^a; Barry V. L. Potter^a

^a Department of Medicinal Chemistry, School of Pharmacy and Pharmacology, University of Bath, Bath, UK

To cite this Article Riley, Andrew M. , Mills, Stephen J. and Potter, Barry V. L.(1996) 'Long-Range ^{31}P - ^{31}P Spin Coupling Constants in the ^{31}P NMR Spectra of Phosphite Triesters', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 111: 1, 71

To link to this Article: DOI: 10.1080/10426509608054700

URL: <http://dx.doi.org/10.1080/10426509608054700>

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.

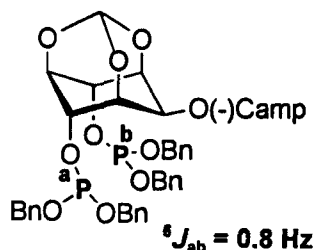
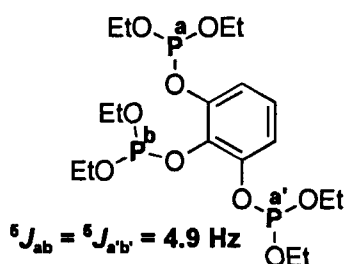
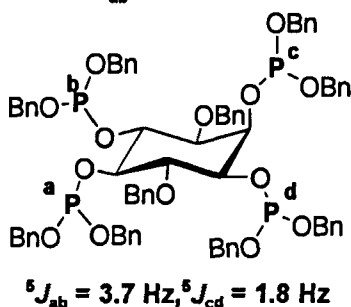
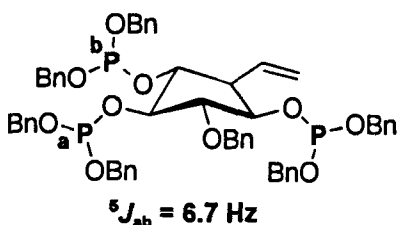
The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any 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.

LONG-RANGE ^{31}P - ^{31}P SPIN COUPLING CONSTANTS IN THE ^{31}P NMR SPECTRA OF PHOSPHITE TRIESTERS

ANDREW M. RILEY, STEPHEN J. MILLS, AND BARRY V. L. POTTER
 Department of Medicinal Chemistry, School of Pharmacy and Pharmacology,
 University of Bath, Claverton Down, Bath BA2 7AY, UK.

Abstract. Data are presented on the magnitudes of $^5J_{\text{PP}}$ and $^6J_{\text{PP}}$ spin-spin coupling constants in the ^{31}P NMR spectra of a variety of novel polyphosphite triesters.

During our investigations into the synthesis of polyphosphate analogues of the ubiquitous second messenger *D-myo*-inositol 1,4,5-trisphosphate, we have reacted many different polyhydroxy compounds with phosphitylating reagents. The ^{31}P NMR spectra of the resulting polyphosphite triesters often display ^{31}P - ^{31}P spin couplings over five¹ or six bonds. We have collected data on the magnitudes of the coupling constants in a range of molecular frameworks, and some examples are given here.



Bn = benzyl, Et = ethyl, (-)Camp = (-)camphanate.

1. M. R. HAMBLIN, B. V. L. POTTER and R. GIGG. *J. Chem. Soc. Chem. Commun.*, 626-627 (1987).