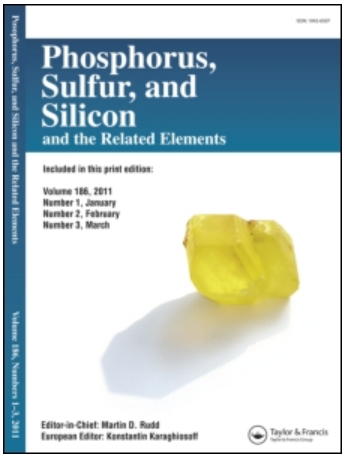


Phosphorus, Sulfur, and Silicon and the Related Elements
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713618290

^{31}P NMR Determination of the Urinary Excretion of the Antitumor Drug Cyclophosphamide in Humans

Claire Joqueviel[a]; Robert Martino[a]; Veronique Gilard[a]; Myriam Malet-martino[a]; Ulf Niemeyer[b]
[a] IMRCP Laboratory, Université Paul Sabatier, Toulouse, France [b] ASTA Medica AG, Frankfurt am Main, Germany

To cite this Article Joqueviel, Claire , Martino, Robert , Gilard, Veronique , Malet-martino, Myriam and Niemeyer, Ulf(1999) '^{31}P NMR Determination of the Urinary Excretion of the Antitumor Drug Cyclophosphamide in Humans', Phosphorus, Sulfur, and Silicon and the Related Elements, 147: 1, 237
To link to this Article: DOI: 10.1080/10426509908053599
URL: http://dx.doi.org/10.1080/10426509908053599

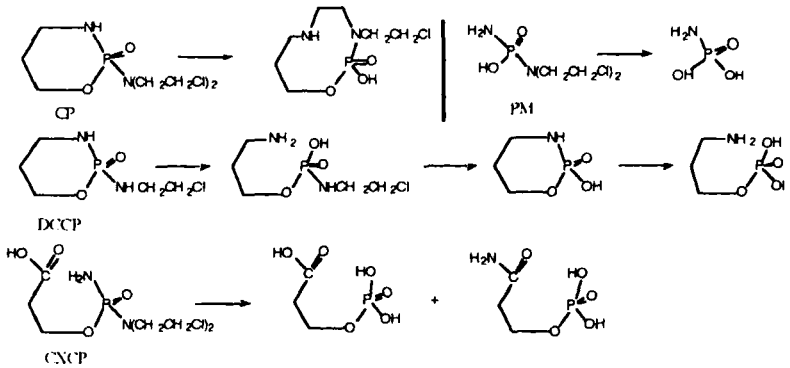
Phosphorus, Sulfur and Silicon, 1999, Vol. 147, pp. 237-237
Reprints available directly from the publisher
Photocopying permitted by license only

^{31}P NMR Determination of the Urinary Excretion of the Antitumor Drug Cyclophosphamide in Humans

CLAIRE JOQUEVIEL[a], ROBERT MARTINO[a], VERONIQUE GILARD[a], MYRIAM MALET-MARTINO[a] and ULF NIEMEYER[b]

[a]*IMRCP Laboratory, Université Paul Sabatier, 118, route de Narbonne, 31062 Toulouse, France and* [b]*ASTA Medica AG, Frankfurt am Main, Germany*

^{31}P NMR was used to analyze urine from 4 patients treated with cyclophosphamide (CP) over 2 days. CP and most of its phosphorated metabolites (carboxyCP (CXCP), dechloroethylCP (DCCP), alcoCP, ketoCP and phosphoramide mustard (PM)) were assayed. Several other signals (10-15) corresponding to unknown compounds were observed. Seven new compounds were identified: all were hydrolysis products of CP or its metabolites CXCP, DCCP and PM as reported below.



CP urinary recovery was not significantly different on the second day (16% of injected dose) than on the first day of treatment (17%). On the other hand, the amount of phosphorated metabolites excreted in urine was much higher after the second dose (37%) than after the first (20%), suggesting auto-induction of CP metabolism. CXCP and its two degradation compounds were by far the major metabolites (11.5% and 23% after first and second dose respectively). Levels of PM, the active metabolite, and its degradation compounds were extremely low. (Supported by ARC, grant 6635).