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On the Reaction of Bis(N -methyl- N - trimethylsilylamido)methylphosphonate with Bis(chloromethyl)chlorophosphinate, Chloromethyldimethylchlorosilane, and Chloral

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OR & FRAZZ

ON THE REACTION OF BIS(N-METHYL-N-TRIMETHYLSILYLAMIDO)METHYLPHOSPHONATE WITH BIS(CHLOROMETHYL)CHLOROPHOSPHINATE, CHLOROMETHYLDIMETHYLCHLOROSILANE, AND CHLORAL

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The interaction of bis(*N*-methyl-*N*-trimethylsilylamido)methylphosphonate **1** with bis(chloromethyl)chlorophosphinate results in the formation of N-methyl-N-trimethylsilylbis(chloromethyl)phosphinate. This result may be explained by the decomposition of intermediately formed diphosphorylated methylamine. The reaction of **1** with chloromethyldimethylchlorosilane gives rise to the new type of cyclic product - 1,3-diaza-2-phospha-4-silolidine **2**.

SCHEME 1

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$$\begin{array}{c} \text{CH}_3 \\ \text{CH}_3 \text{P(O)(NSiMe_3)}_2 + \text{CCl}_3 \text{CHO} \\ \mathbf{1} \end{array} \xrightarrow{-\text{Me}_3 \text{SiCl}} \begin{array}{c} \text{Oll} \\ \text{CH}_3 \text{P} \\ \text{Me} \end{array} \xrightarrow{\text{CH} - \text{OSiMe}_3}$$

SCHEME 2

The interaction of **1** with chloral proceeds with the elimination of trimethylchlorosilane and formation of 1,3,2-diazaphospholidine **3**.