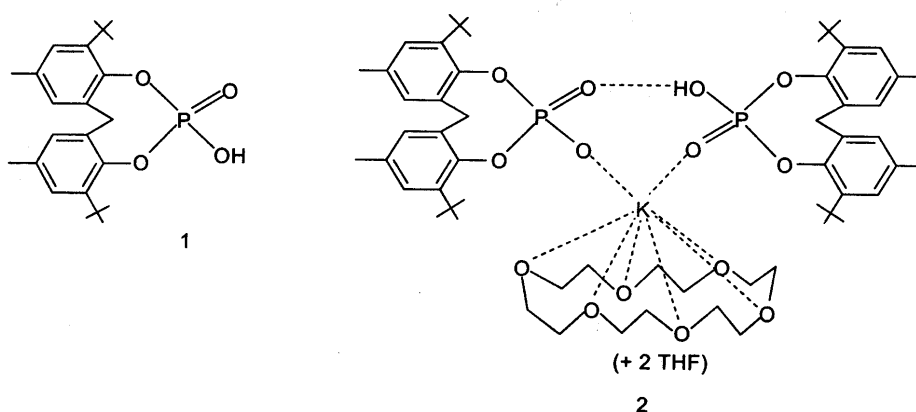


Hydrogen-bonding patterns involving a cyclic phosphate

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Hydrogen bonding as a structure-determinant is well-known in biology and chemistry. Phosphates, which always have electronegative oxygen atoms, bear no exception in their involvement in hydrogen bonding interactions. In biosystems the ubiquitous presence of water makes the study of structural patterns due to H-bonding much too complicated. We have been interested in the structure and reactivity of cyclic phosphorus systems, and in this connection have made an attempt to study H-bonding patterns associated with the cyclic phosphate **1**. Compound **1** itself exists in two crystallographic modifications. Its complexes with imidazole, methanol (as a solvate) and the amino acid L-proline have been structurally characterized. In a novel reaction of **1** with KF/18-crown-6 in tetrahydrofuran, the complex **2** is isolated. H-bonding features found in all the above compounds are discussed.



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