

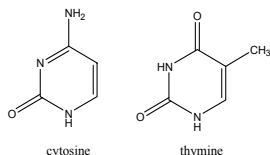
## Studies in the Structural Chemistry of Complexes between Nucleobases and s-Block Metals

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In the past years, it has been found that interaction of biomolecules with metal ions are of interest in studies of biological functions of metal ions, especially alkali and alkaline earth metals, because they have abundant distribution in the human body. In addition it is known that s-block metal ions interact with the negatively charged phosphate group of nucleic acids and thus stabilise the DNA and RNA structures.

The study of the structural chemistry of nucleobases with transition metals is well known and many complexes have been synthesized and characterised. By contrast, the literature does not show many structures containing nucleobases and s-block metals and only little information is provided on the subject [1].

To rectify this imbalance, part of our research concentrates on the synthesis and crystallographic characterisation of complexes of the five nucleobases (cytosine and thymine for example) with the Group I metal ions lithium, sodium, potassium, rubidium and caesium. We will present some examples of these new complexes and discuss the structural features observed in each case (coordination, hydrogen bonding etc.).



[1] Lippert B., *Coordination Chemistry Reviews*, 2000, **200-202**, 487-516.

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