

Hydrogen-bonding and Stacking Arrays in Picrate Salts of Nitrogen-Bases.

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Single crystal X-ray structure determinations are described for an array of monoprotated uni- and oligo-dentate nitrogen-donor ligand picrate salts, $(BH)^+(pic)^-(\cdot S)$ (pic- = picrate anion, $C_6H_2O_7^-$) (BH^+ = nitrogen base cation) (S = solvent). Hydrogen bonding interactions between the BH^+ hydrogen atoms and the picrate phenoxy-oxygen atoms are dominant determinants of the structures, as also the parallel stackings of anion and (aromatic) base planes, of which both hetero- and homo-geneous cases arise, this work also being an extension of detailed crystallographic studies of salts formed by some of these bases with other acids. It is believed that studies of these types of interactions are a useful contribution to the novel approaches taken towards understanding molecular recognition and crystal engineering. The present compounds were prepared on a millimolar scale by adding the base to the correct molar ratio of picric acid (caution) dissolved in ca. 5mL of acetonitrile or corresponding base (if liquid at room temperature).