Acta Cryst. (2007). E**63**, m1687 [**doi:10.1107/S1600536807023409**]

Sodium 2,4-dinitrophenolate monohydrate

N. von Prondzinski, M. Winter and K. Merz

Comment

2,4-Dinitrophenolate is a versatile ligand for crystal engineering, which is able to coordinate with phenoxy or nitro groups to metal centers, yielding different metal complexes (Prondzinski *et al.*, 2007; Zaderenko *et al.*, 1997). It is known that nitrophenols not only form various π-stacking complexes with other aromatic molecules but also form salts through specific electrostatic or hydrogen-bonding interactions (In *et al.*, 1997). The bonding of electron-donor-acceptor complexes depends strongly on the substitution pattern of nitro and hydroxy groups on the benzene ring.

The asymmetric unit of (I) is shown in Fig. 1, where Na atoms and water molecules each lies on a twofold rotation axis. The crystal packing of (I) shows a laminated structure with intercalated coordinated 2,4-dinitrophenolate spacer (Fig. 2). The laminated structure consists of NaO_6 chains linked by 2,4-dinitrophenolate ligands. Each Na atom exhibits a distorted octahedral geometry. The Na1 atom is surrounded by four water molecules and two O atoms from two *para*-nitro groups. The Na2 atom is surrounded by two O atoms from two *ortho*-nitro groups and four phenolate O atoms.