Über die Dialkaliacetylendicarboxylate $Na_2(C_2(COO)_2)(H_2O)_4$ und $K_2(C_2(COO)_2)(H_2O)$

On Dialkali Acetylenedicarboxylates $Na_2(C_2(COO)_2)(H_2O)_4$ and $K_2(C_2(COO)_2)(H_2O)$

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From aqueous solutions containing acetylenedicarboxylic acid and Na_2CO_3 or KOH single crystals of $Na_2(C_2(COO)_2)(H_2O)_4$ ($P2_1/n$, $Z = 2$) and $K_2(C_2(COO)_2)(H_2O)$ ($P1$, $Z = 2$) were obtained by slow evaporation of the solvent. In $Na_2(C_2(COO)_2)(H_2O)_4$ the sodium atom is co-ordinated almost octahedrally by three water molecules and three oxygen atoms of the carboxylate ligands. These octahedra are connected to layers, which are held together by hydrogen bonds. In $K_2(C_2(COO)_2)(H_2O)$ two crystallographic distinct potassium ions exist both seven co-ordinate by oxygen atoms stemming from water molecules and carboxylate ligands. These KO_7 polyhedra are linked to a three-dimensional structure by the bifunctional carboxylate anions and the water molecules.

Key words: Carboxylate, Crystal Structure, Potassium, Sodium