Macrocyclic Amines and their Adducts with Acids

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Conformations of the macrocyclic amine in the structures of Nmethylated derivative (1) and of the adduct with fumaric acid (2) are different. In (2) the cation is hexaprotonated and occupies a special position in a plane of symmetry. The ionic synthon is built from one hexaprotonated macrocyclic cation and six fumaric anions. Each anion is linked to three neighbouring cations and to water molecules by strong hydrogen bonds N^+ -H···O⁻ thus generating one-dimensional supramolecular ribbons.



The ionic synthon of (2)

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