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A comparative study of two polymorphs of L-aspartic acid hydrochloride

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Two polymorphs of l-aspartic acid hydrochloride, C4H8NO4+Cl-, were obtained from the same aqueous solution.Their crystal structures have been determined from singlecrystal data collected at 100 K. The crystal structures revealed
three- and two-dimensional hydrogen-bonding networks forthe triclinic and orthorhombic polymorphs, respectively. The cations and anions are connected to one another via N—H...Cl and O—H...Cl interactions and form alternating
cation–anion layer-like structures. The two polymorphs share common structural features; however, the conformations of the l-aspartate cations and the crystal packings are different. Furthermore, the molecular packing of the orthorhombic polymorph contains more interesting interactions which seems
to be a favourable factor for more efficient charge transfer within the crystal.

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