Title:	Salts of Amoxapine with Improved Solubility for Enhanced Pharmaceutical Applicability
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Abstract:	The objective of pharmaceutical cocrystallization is to create crystalline analogues that have vastly different properties, such as solubility, melting point, stability, and bioavailability from that observed in the pure active pharmaceutical ingredients (APIs). Amoxapine is a benzoxazepine derivative and exhibits antidepressant properties. Amoxapine has very low solubility in water, so it was cocrystallized with natural acids in a 1:1 ratio in appropriate solvents by the solvent-drop grinding method. Single crystals of cocrystals were grown by the solvent evaporation method in water, ethanol, and methanol. Crystal structures of API salts were determined by single-crystal X-ray diffraction. Salts were characterized by Fourier transform infrared spectroscopy, differential scanning calorimetry, and powder X-ray diffraction. Solubility of salts was determined in water by the shake-flask method at 37 °C using UV–vis spectroscopy. Salts of amoxapine with different acids were successfully developed, and their crystal structure was determined. Enhanced solubility was found in the salts of amoxapine for pharmaceutical application in drug formulation.
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