

MS36-04 | PHARMACEUTICAL SOLID SOLUTIONS FROM NON-SOLUBLE COMPONENTS

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Crystalline solid solutions of molecular species are a poorly understood class of material that allow the fine-tuning of structural and physicochemical properties, in continuum. Traditionally such phases are prepared according to simple guidelines as summarised by the Hume-Rotary and Kitaigorodskii set of rules. Similar size, isomorphism of the parent component and molecular isostructurality are often deemed as a requirement for solubility in the solid state.

Recent works show the limits of the above-mentioned rules and define alternative supramolecular and synthetic strategies for the development of solid solutions from “non-soluble” components. Incidentally, the new strategy enables crystalline solid solutions of pharmaceuticals for more effective and simpler therapies.