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# Mechanochemically induced solid state transformations: the case of raloxifene hydrochloride

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## ABSTRACT

Raloxifene hydrochloride is a benzothiophene derivative mainly used in the prevention and treatment of osteoporosis, but exhibits a low bioavailability hindered by its poor water solubility. In this study, a mechanochemical approach based on neat and liquid-assisted grinding was applied to produce new solid forms of raloxifene hydrochloride. The solids obtained were characterized by several solid-state techniques, such as powder x-ray diffraction, thermal analysis, infrared and Raman spectroscopy. These results showed that depending on the processing conditions solvated or amorphous forms can be produced. The thermal stability of the new forms was also investigated

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