

Abstract

Co-crystallization is a reliable method to modify the physical and chemical properties of the drugs such as, solubility, stability, dissolution, and bioavailability without altering their intrinsic structure and pharmacological behavior. The synthesis of some novel co-crystals/polymorphs/pseudo-polymorph derived from methyldopa and different co-formers, their single crystal X-ray diffractive characterization are still not reported in literature. Keeping in view the current scenario, present work reports the design, synthesis, polymorphic studies and characterization of newly synthesized co-crystal/pseudo-polymorphs. The green Chemistry is used to synthesize all the target compounds with the slightly modified reaction conditions to get the maximum yield and purity of the target compounds. The solvent drop grinding method was used to synthesize the co-crystals. The synthesized compounds were characterized by IR and UV-Visible spectroscopy. Characterization was further supported by single crystal X-ray diffractive crystallographic analysis and also analyzed by using thermogravimetric analysis.