

Crystal Polymorphism of (S)-1,1,2-Triphenyl-1,2-ethanediol

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Monoesters derived from (R)- and (S)-1,1,2-triphenyl-1,2-ethanediol (also used as a chiral auxiliary reagent) have found wide application in asymmetric aldol additions used in synthesis of natural products and biological active compounds. In order to improve its solubility, we have initiated an investigation into potential polymorphic forms. Three anhydrous polymorphs and an amorphous one have been isolated and characterized. Forms A and B are monotropically related. However, an enantiotropic relationship has been found between A and C forms and between B and C forms. Moreover three additional forms have been detected from super cooled melts and have been studied by thermal analysis.