

**PXRD ANALYSIS OF THE MECHANICALLY INDUCED INTER-CONVERSION  
BETWEEN TWO NEAT POLYMORPHIC FORMS OF BMS-XYZ HAVING SIMILAR  
LAYERED CRYSTAL STRUCTURES**

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Forms N-2 and N-3 of BMS-XYZ, crystallize in the triclinic P-1 space group with one molecule in the asymmetric unit. These two polymorphs have similar packing within the (001) layer, but differ in the interlayer packing by a translation along [010]. This structural relationship suggested the possibility of shear induced transformations between the two forms. The purpose of these studies is to investigate the thermodynamic relationship between N-2 and N-3 and the interconversion behavior between the two forms during mechanical activation and crystallization. The results, obtained by grinding and powder x-ray diffraction experiments, showed that mechanical activation can induce interconversion between forms N-2 and N-3 in both the thermodynamically favorable direction and in the thermodynamically unfavorable direction.