DETERMINATION OF CRYSTALLIZATION OF AMORPHOUS INDOMETHACIN (IMC) IN COMPACTED TABLETS

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Compacts of amorphous IMC were prepared at 500 psi using 3/8-inch flat-faced beveled (FFB) tooling and the Carver press. Compacts were ~150 mg with thickness of ~2.0 mm. At designated time points, samples were removed from the station and tested using X-ray diffraction to ensure that the complete tablet was 'amorphous' in nature. Three sets of amorphous IMC compacts were prepared and put on station at different temperatures including 35C, RT (20-25C), and -5C. After preparation, all samples were stored over P2O5 at -5C until aging. Each set of the amorphous IMC compacts were aged by exposure to ambient conditions in two-hour periods over a series of days. After each aging step, the compacts were mapped using a Bede D1 Analyst to observe the gradual formation of crystallization. The D1 Analyst is capable of mapping very low levels of polycrystalline material using an X-ray spot size less than 0.5 x 0.5 mm on the sample. This paper will show the dynamics of crystallisation of amorphous compacts under aging.