

APPLICATION OF XRD IN POLYMORPH IDENTIFICATION DURING HIGH THROUGHPUT SCREENING FOR PRE-FORMULATIONS

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A high throughput crystallization system was used to form crystals in different solvent combinations for several model compounds. The resulting crystals were analyzed by using a XRD system that is capable of rapid serial (high throughput) screening. The collected XRD patterns were sorted by using a proprietary software package. By combing the XRD sorting results with those of the DSC and TGA, polymorphs and solvates were identified. This paper will discuss the overall work flow and focus on the results of polymorph identification of a few model compounds such as acetaminophen, phenylbutazone and naproxen.