

**A STUDY ON THE TOTAL EVALUATION OF PHARMACEUTICAL
PRODUCTS USING GENERAL PURPOSE XRD EQUIPMENT**

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The study of phase transitions among the various solid states is important to the pharmaceutical products. For example, in the process of drug synthesis requires to evaluate characterization of polymorphism and qualitative and quantitative analysis of impurities. In the process of tableting, it is required to estimate the amount of pharmaceutical products in the tablet, to evaluate impurities polymorphic forms and the content uniformity in a tablet of drug and excipient. In this way, for many evaluations, it takes very long time to evaluate one new medicine, generally. In this presentation, the qualitative and quantitative analysis of impurities polymorphic forms in tablets have been evaluated through the transmission mode. The characterization of polymorphism of a drug substance has been evaluated to use simultaneously performing XRD and DSC measurements on the same sample. These measurements have been made using the Rigaku Ultima IV 2 kW theta- theta design for horizontal sample mounting goniometer configured for the total evaluation of pharmaceutical products.