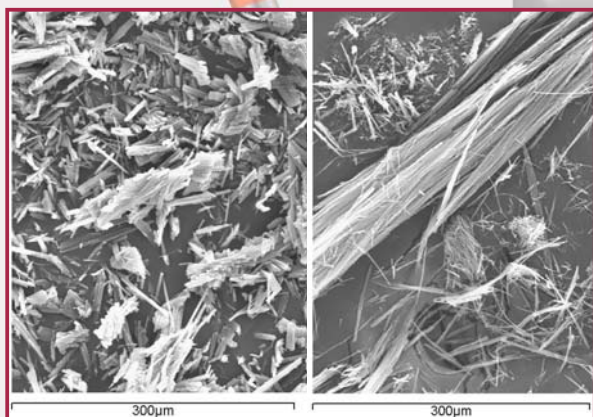


POLYMORPH

ADSC-NIR Polymorph Screening Techniques

Polymorphism is the ability of a pharmaceutical compound to exist in different solid crystalline forms. Different polymorphs can have different rates of uptake in the body, altering the bioavailability of the active pharmaceutical ingredient. This project will develop a non-contact screening technique capable of identifying all polymorphic structures in a compound.

The project will achieve this goal by the combination of spectral and thermal analytical methods. The unique feature of this combination is the ability to simultaneously monitor the chemical composition of a sample (using Infrared and Raman spectroscopy) and the physical behaviour when subjected to highly controlled thermal cycles (using Differential Scanning Calorimetry - DSC).



Two Polymorphic Structures of the same Compound New Combined Spectral and Thermal Equipment

The pharmaceutical industry is highly regulated which contributes to the high development costs of potential new drugs. It is estimated that from 10,000 new pharmaceutical compounds synthesised, approximately 100 are rigorously screened, with 10 of those reaching clinical evaluation. Only one will emerge as a safe, new marketable drug. Better compound characterisation will enable the pharmaceutical industry improve product to market time and protect research and development costs through patents.

For more information about Polymorph please contact the Project Researcher,
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