CRYSFORMA

RAMAN MICROSCOPY

Chemical imaging and mapping of pharmaceutical solid dosage forms using Raman microscopy is a very useful analytical technique to ensure that the final drug product has the desired homogeneity and solid state characteristics.

Dispersion of an API in a tablet ensures correct dosage release. However, minor changes in processing conditions or raw materials may cause aggregation. Raman chemical mapping detects these and other problems, as it allows the visualization of the space distribution of API and excipients.

On the other hand, unwanted changes in the solid state of an API, such as polymorphic transformations, may occur during production or storage of the finished drug product. These transformations may result in changes in the solid state properties, as well as in regulatory or patent infringement implications. Raman microscopy allows mapping the distribution of polymorphs, hydrates, solvates or excipients across a tablet.

MAIN CHARACTERISTICS

- Spatial resolution of 1 μm
- Non- destructive, non- contact analysis
- Analysis can be performed through glass or plastic container
- Requires little or no sample preparation, avoiding possible undesired transformations
- Allows mapping both crystalline and amorphous materials
- Less spectrum overlap with common pharmaceutical excipients than IR spectroscopy

CRYSFORMA provides complete scientific support for the discovery, analysis and scale-up of polymorphs, hydrates, amorphous phases, salts and co-crystals of active pharmaceutical ingredients or intermediates.

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