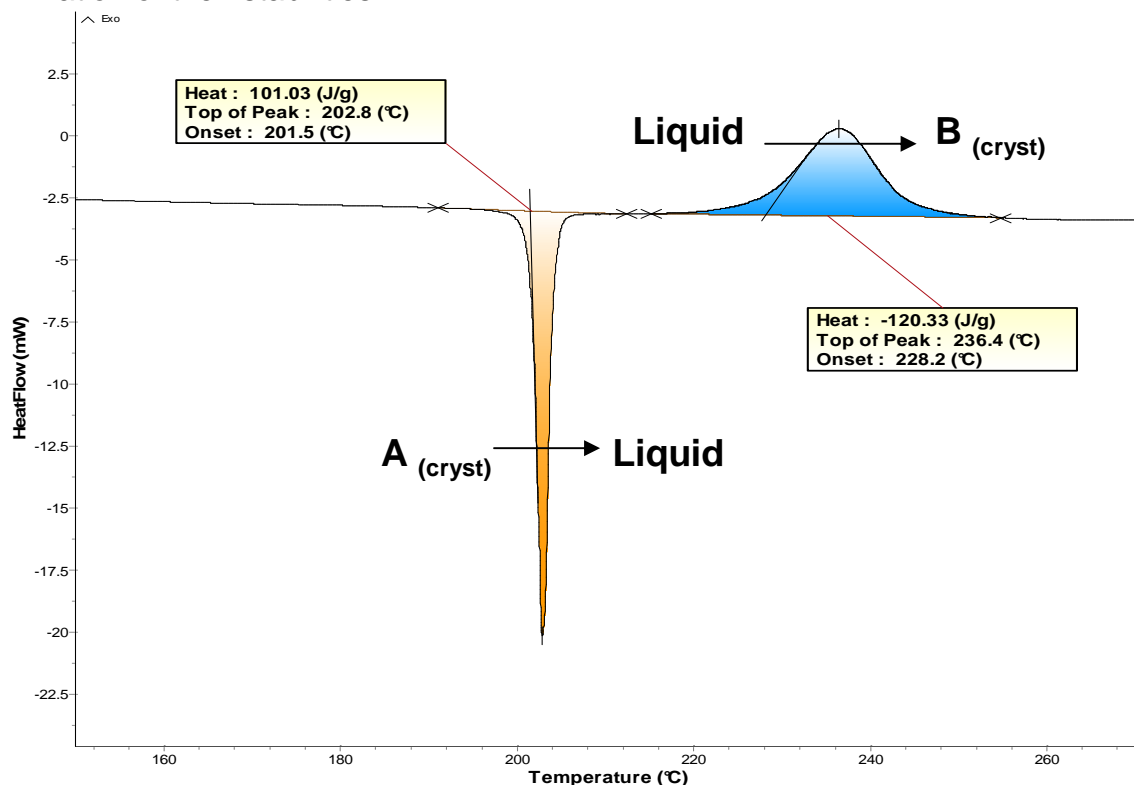


Characterization of a polymorphous powder by DSC

Introduction:

The characterization of crystal polymorphisms in drugs is an important point for the pharmaceutical industry. This importance is justified by the fact that the properties of a drug depends a lot on its polymorphic forms. One of the DSC important issue is the qualification of polymorphs and the determination of their stabilities.



Experimental:

Sample: pharmaceutical powder sample constituted by a mixture of polymorphs A and B.

DSC 131 Evo experimental conditions:

Sample mass: about 7 mg of powder

Experimental procedure:

Heating from room temperature to 250°C at 3°C/min.

Type of crucible : 100µl aluminum crucible closed with a perforated lid.

Instrument:

DSC 131 Evo

-170°C up to 700°C

Results:

- A sharp endothermic peak is observable above 200°C. It corresponds to the melting of the polymorph A.
- Then the crystallization of the liquid phase into the form B produces an exothermic effect at higher temperature.
- The melting peak of polymorph B is not detected in the studied range of temperature.
- Polymorph B is more stable than the form A.



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