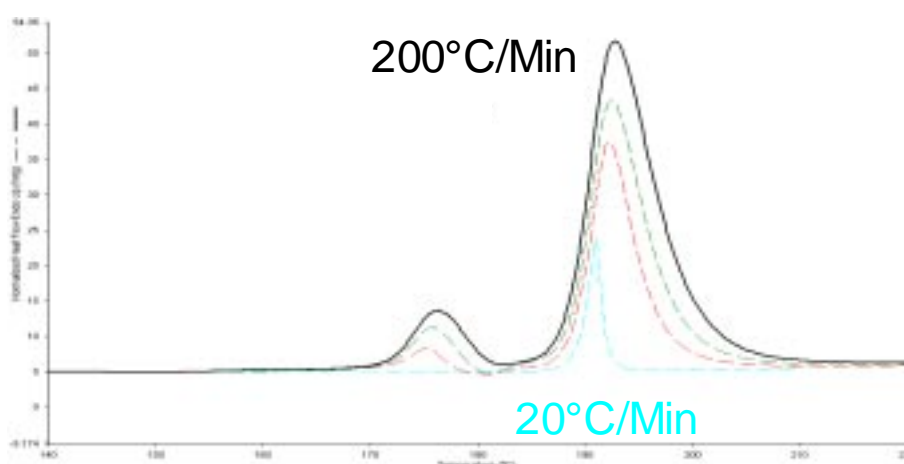


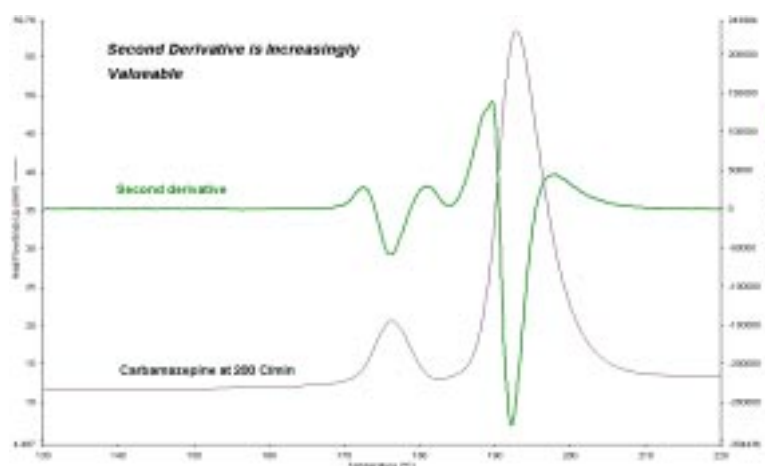
The use of HyperDSC to enhance sensitivity in the study of Pharmaceuticals

HyperDSC allows the study of small transitions that were difficult or impossible to see using conventional slow rates. For example, samples of carbamazepine were heated at rates between 20 and 200°C/min.

The thermogram below shows the existence of at least one lower melting peak that is shown at the HyperDSC scan rates that is very difficult to see at conventional rates. Even at 200°C/min peak resolution is not sacrificed, therefore allowing a more complete interpretation of the sample



In the case of the above sample of Carbamazepine, the use of the second derivative curve also shows the existence of a third peak on the front edge of the main melting peak. This is shown below



HyperDSC can also be used to great effect in the study of very small samples. The sensitivity increase that the use of HyperDSC gives means that very small sample masses can be studied. The thermogram shown below is from a single crystal of a sample run at 200°C/min

