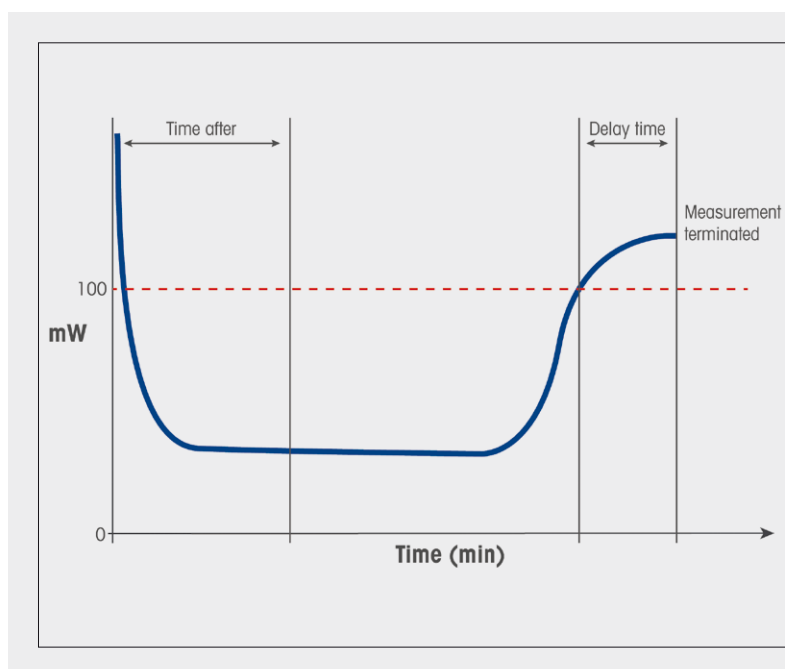


Conditional Experiment Termination Save Unnecessary Measurement Time

This software option reduces unnecessary measurement time and improves safety when measuring unknown samples. It enables the instrument to terminate an experiment automatically when a measured value exceeds a defined limit.



Available for DSC, TGA or TMA:

- Termination criterion can be defined for each segment
- Termination of an experiment is possible at any time
- Shorten measurement time
- Preserve and protect the measuring cell

Once the user defines the termination criterion, two other parameters can be set.

Time after: how long after the start of the measurement the system waits before looking for the termination criterion.

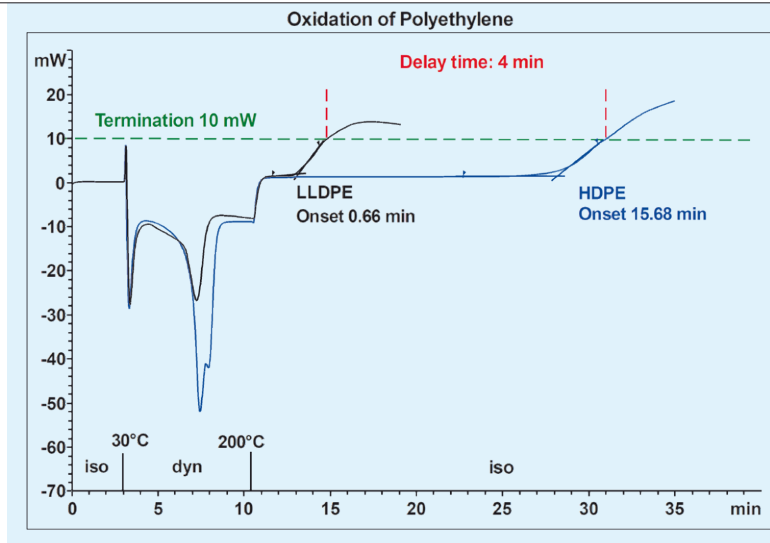
Delay time: how long the system waits before stopping the experiment after the termination criterion is met.

The Conditional Experiment Termination option enables the user to terminate an experiment automatically as soon as the measured signal exceeds a certain value. Therefore, it is possible to terminate an experiment before the end time or the end temperature is reached.

Features and benefits

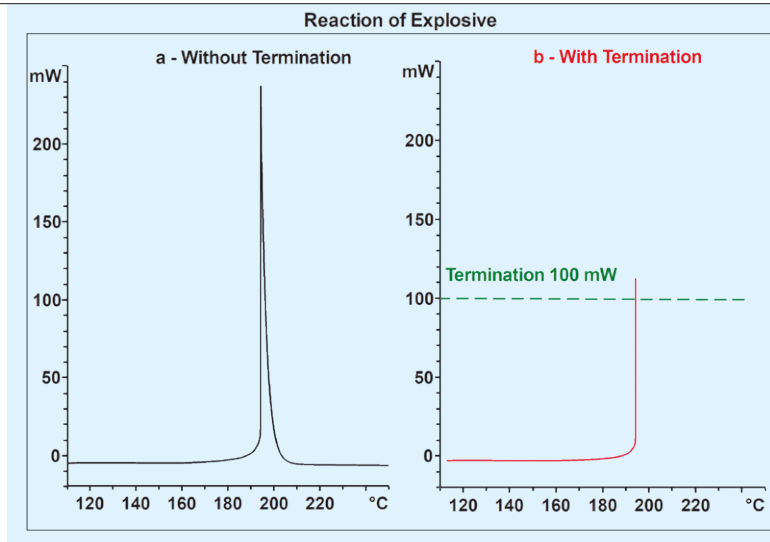
- **Conditional experiment termination** – saves valuable experiment time when only one effect must be measured
- **Limits potential hazards** – protects measuring cell against dangers and contamination from reactions

Application Examples



Comparison of polyethylenes

Depending on composition, oxidation induction time (OIT) can occur anywhere between a few seconds and several hours. However, only the onset time of oxidation needs to be detected, after this the measurement can be terminated. This example shows a comparison of two polyethylene samples. Both samples are measured using the same standard same temperature program (EN 728, ISO/ TR 10837). The samples are measured isothermally at 200 °C until the onset of the exothermic oxidation. Once the heat flow exceeds the set values of 10 mW, the measurements automatically terminate after four additional minutes.



Example of an explosive

The behavior of explosive materials is frequently investigated by DSC. As the reactions observed are usually highly exothermic, the measurements can be terminated when a certain value of the heat flow is measured. This feature protects the measuring cell against destruction from any excessive reaction that may occur. The measurement (a) shows dangerously high heat flow results, while the terminated measurement (b) is stopped after a value of 100 mW is reached.



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