

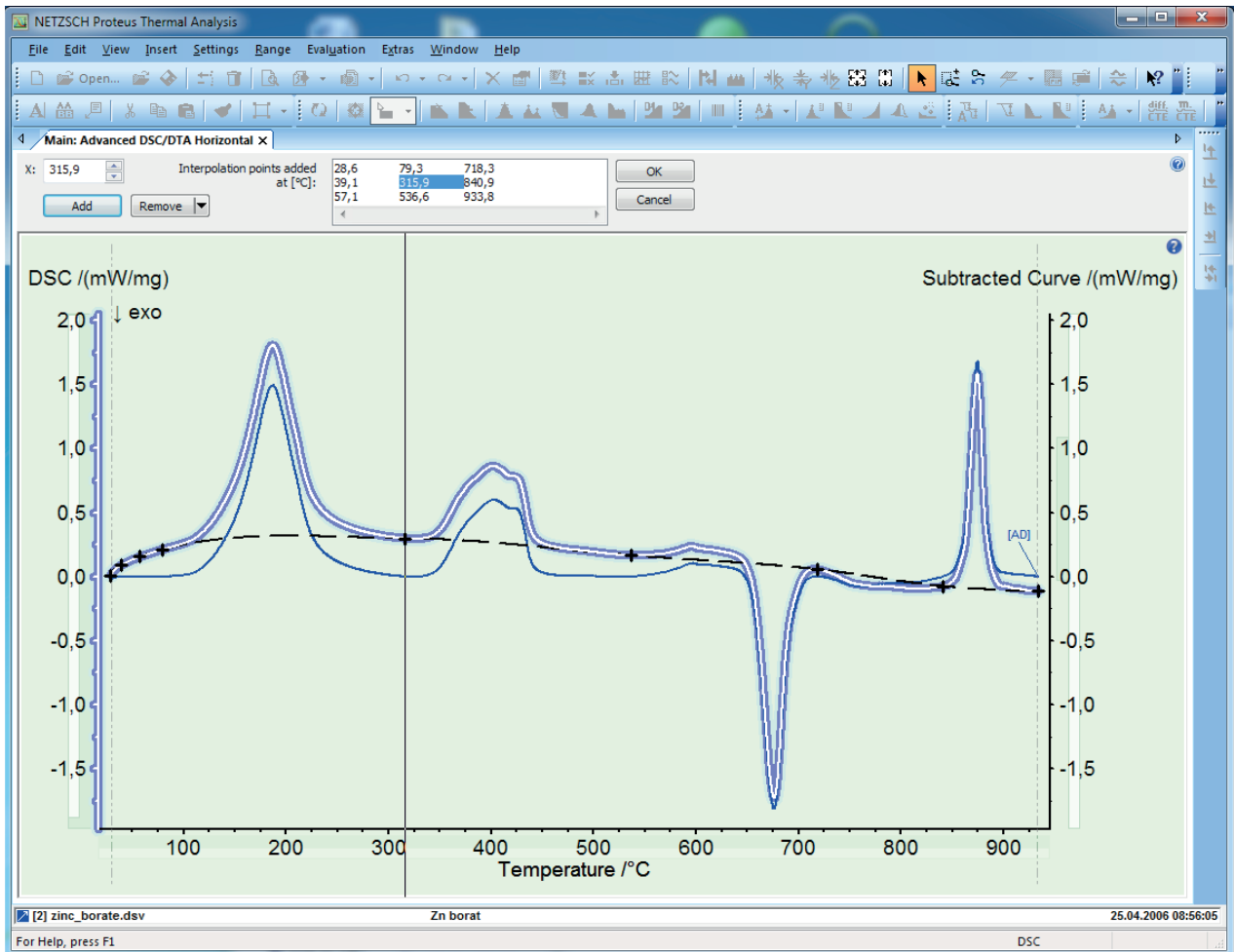
SOFTWARE INNOVATION

Advanced DSC/DTA Horizontal

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The new correction functionality "Advanced DSC/DTA Horizontal" (\rightarrow Menu/Settings), which is available in *Proteus*[®] analysis version 7.2 or higher, replaces the former function "DSC/DTA Horizontal". "Advanced DSC/DTA Horizontal" allows for subtraction of a calculated baseline through user-defined interpolation points (see figure 1a). An arbitrary number of interpolation points can

be defined using the cursor and simply added. Removal of single or all interpolation points is also possible within the user interface. The dashed black subtracted curve shows the calculated baseline that will be subtracted, the resulting corrected curve is also displayed with permanent label [AD] in order to indicate "Advanced".



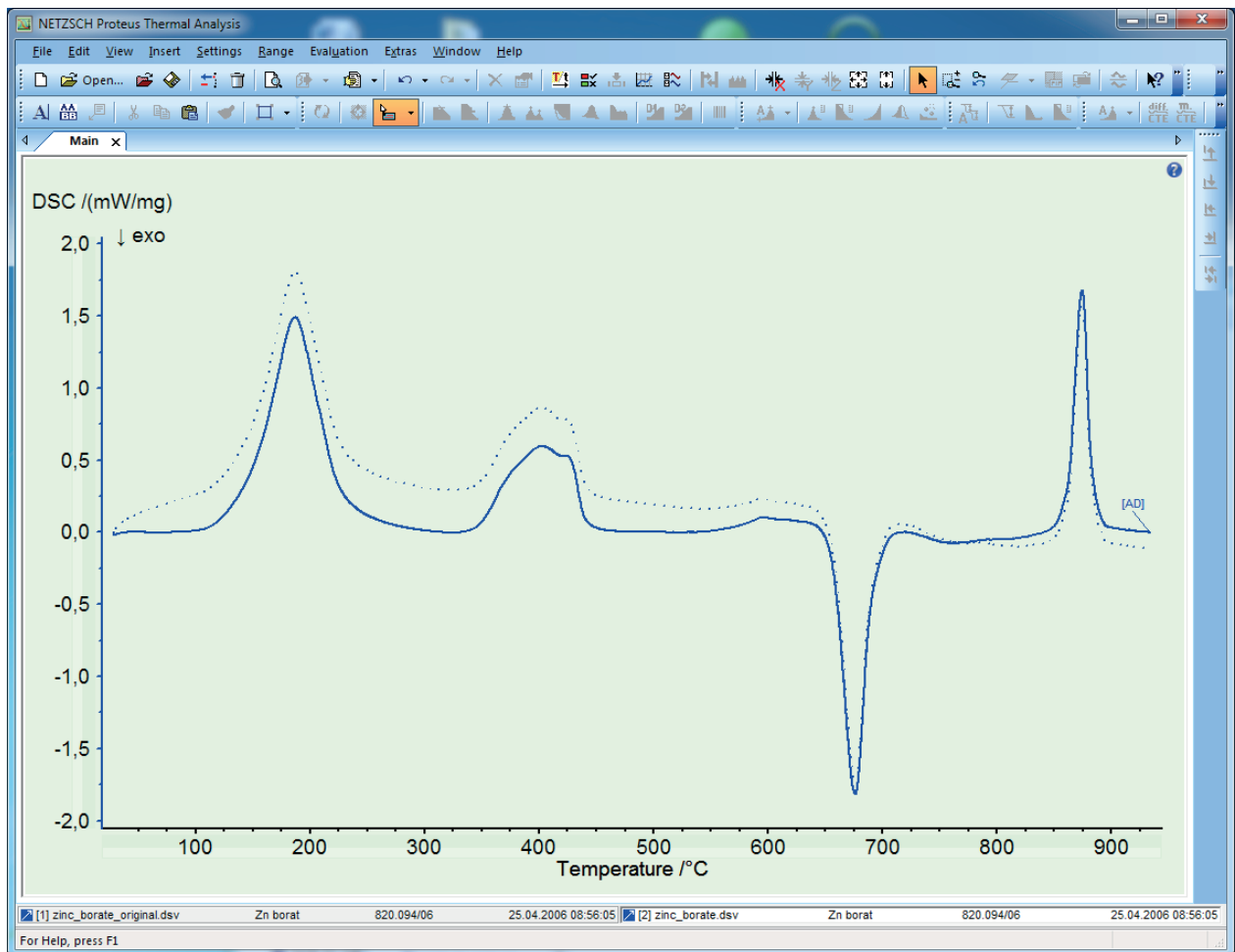
1a User interface of "Advanced DSC/DTA Horizontal" within *Proteus*[®] analysis. The highlighted white curve represents the original DSC data, the black dashed curve is the calculated baseline through the interpolation points (crosses) that is subtracted from the original curve. The result is the blue curve with permanent label [AD].

Depending on the number of interpolation points, the subtracted curve is a

- horizontal straight line (through one interpolation point)
- arbitrary straight line (through two interpolation points)
- interpolated curve (through more than two interpolation points)

Existing analysis states containing DSC or DTA curves where the old function "DSC/DTA Horizontal" was applied are fully compatible with *Proteus*® analysis 7.2 or higher and "Advanced DSC/DTA Horizontal".

"Advanced DSC/DTA Horizontal" obviously allows for improving the baseline of a DSC or DTA measurement as shown in figure 1b. It must be emphasized that the correction "Advanced DSC/DTA Horizontal" is not based on a physical model but on user-defined interpolation points. Those should be set in regions of the curve where no caloric effects occur requiring a certain level of experience.



1b Comparison between the original DSC curve (dotted line) and the corrected DSC curve where "Advanced DSC/DTA Horizontal" was used (solid line with permanent label [AD]).