

17

detecting an amplitude signal and a phase signal, measured with respect to a phase of the prescribed function, of a differential heat flow signal; and

processing the amplitude signal and the phase signal directly into components relating to an energy storage portion and an energy loss portion of a complex specific heat derived from the differential heat flow signal.

18. A method of analyzing a sample using a heat flux differential scanning calorimeter comprising:

subjecting the sample and a reference to a temperature change in accord with a prescribed function comprising the sum of a linearly changing part and a periodically changing part having a specified frequency and a specified amplitude;

18

detecting an amplitude signal and a phase signal, measured with respect to a phase of the prescribed function, of a differential heat flow signal;

processing the amplitude signal and the phase signal to determine a factor relating to a universal calibration function; and

using the factor relating to the universal calibration function to provide separate components relating to an energy storage portion and an energy loss portion of a complex specific heat derived from the differential heat flow signal.

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