

Title (en)  
MICROCALORIMETER

Title (de)  
MIKROKALORIMETER

Title (fr)  
MICROCALORIMETRE

Publication  
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Application  
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Abstract (en)  
[origin: WO9954696A1] The invention relates to a microcalorimeter or a group of microcalorimeters, comprising a sensor component (1, 2) consisting of a thermometer (1) with a superconducting material and an absorber (2) which is thermally coupled to the thermometer, a cooling device (30), a heating device (20) and a read-out device. The cooling device and the heating device are thermally coupled to the sensor component separately from each other and at least the cooling device is thermally coupled to the sensor component across its surface. This design allows for the adjustment of a large dynamic area with minimum calorific output and for the cooling device and heating device to be optimized separately, resulting in improved energy resolution or signal acceleration. This type of microcalorimeter is used, for example, in material analysis or quality assurance by X-ray fluorescence analysis, preferably in the semiconductors industry, but is also suitable for the determination of molecules in biotechnology.

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