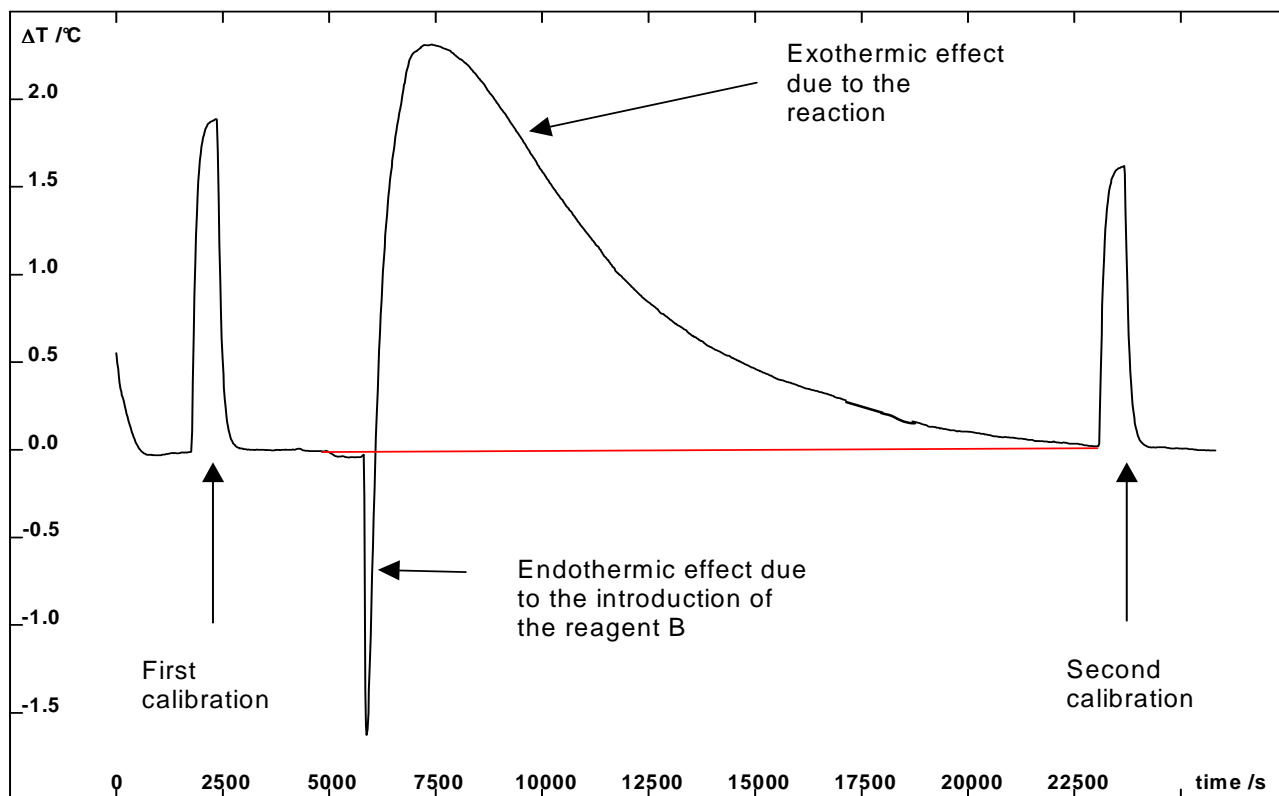


Determination of the heat of reaction



Experimental :

The peak of the reaction is integrated. The corresponding area is equal to 13495.48 °C.s. In order to obtain the value of the heat of reaction, the value of the surface is multiplied by the average value of UA before and after the reaction.

$Q = - = 38462 \text{ J (exothermic effect)}$

Qdos correction: (see application note AN174)

Qcor is the heat corrected from the heat of introduction of the reagent.

$Q_{cor} = Q - Q_{dos}$

$Q_{cor} = 38462 - 594 = 37868 \text{ J}$

$\Delta H_{cor} = - \frac{37868}{15.6} = 2427 \text{ J/g of methanol}$

$\Delta H_{cor} = - \frac{37868}{123.6} = - 306 \text{ J/g of mixture}$

ΔT in adiabatic mode:

It corresponds to the increase of temperature which would be observed in adiabatic mode.

Instrument :

DRC (- 80, + 150°C)



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