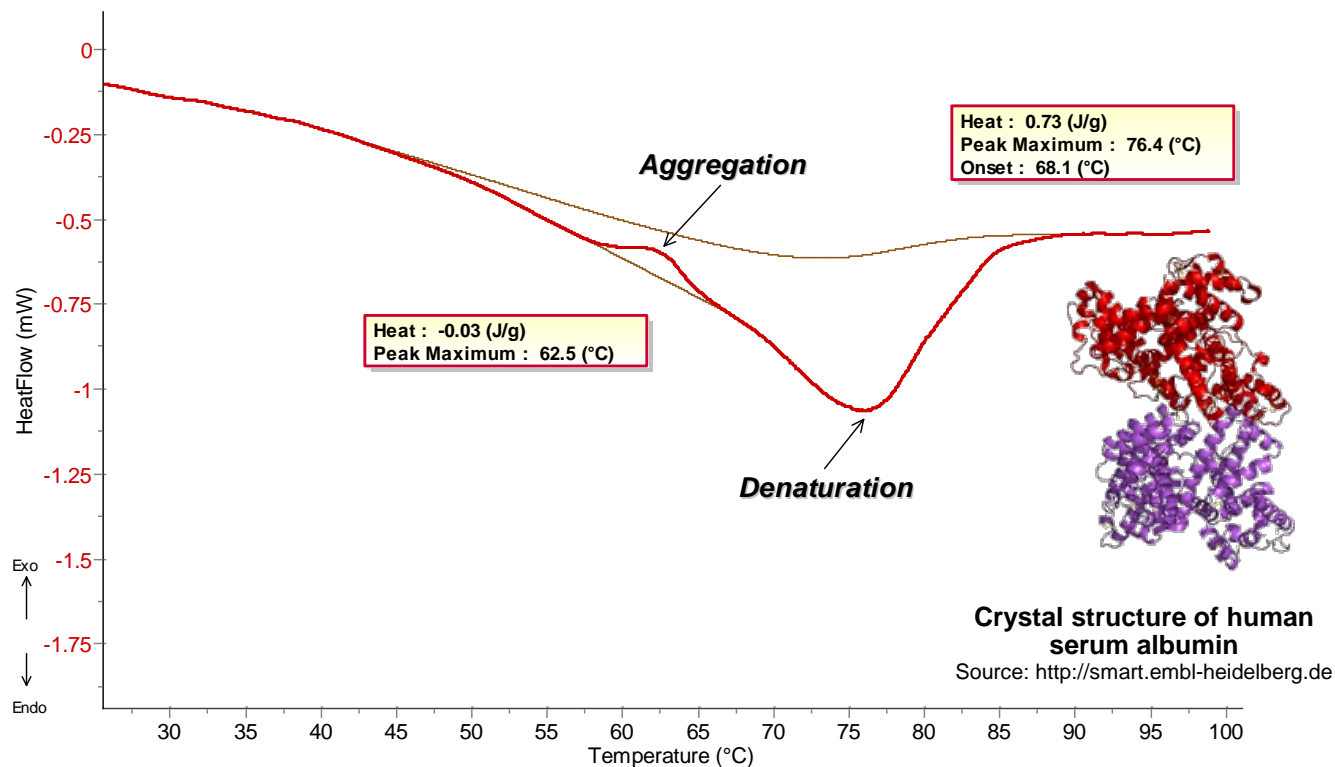


# Denaturation of Albumin by $\mu$ DSC

## Introduction:

Albumins are major proteins which are found in many food products such as egg white, milk or meat. These proteins are able to coagulate under the influence of the temperature. This thermal property is commonly used in food processes, such as in sugar refining to clarify the solutions or as emulsifying and gelling agents.



## Experimental

*Sample:*

Albumin from egg

*$\mu$ DSC3 Evo experimental conditions:*

Sample mass: 550 mg of 10% albumin in a 0.1M NaCl solution pH 5.

Reference: 550 mg of 0.1M NaCl solution

Type of cell: Batch cell

Experimental procedure: The temperature is programmed from 20 °C up to 95 °C at 1 °C.min<sup>-1</sup>.

$\mu$ DSC3 evo  
-20 °C to 120 °C



[www.setaram.com](http://www.setaram.com)  
[sales@setaram.com](mailto:sales@setaram.com)



## Denaturation of Albumin by $\mu$ DSC

### Results

The denaturation of albumin corresponding to an endothermic event occurs at 68.1°C with a heat of 0.73 J/g of solution or 7.3 J/g of albumin

The denaturation temperature (corresponding to the peak maximum) is measured at 76.4°C.

At the beginning of the denaturation, an exothermic event is detected. It is attributed to an aggregation reaction<sup>(1)</sup>.

*(For further information ask for publication B1003)*

**(1): N. Hagollen P. Relkin, B. Launay, JCAT (1995) 268-273**

$\mu$ DSC3 evo  
-20 °C to 120 °C



[www.setaram.com](http://www.setaram.com)  
[sales@setaram.com](mailto:sales@setaram.com)

