



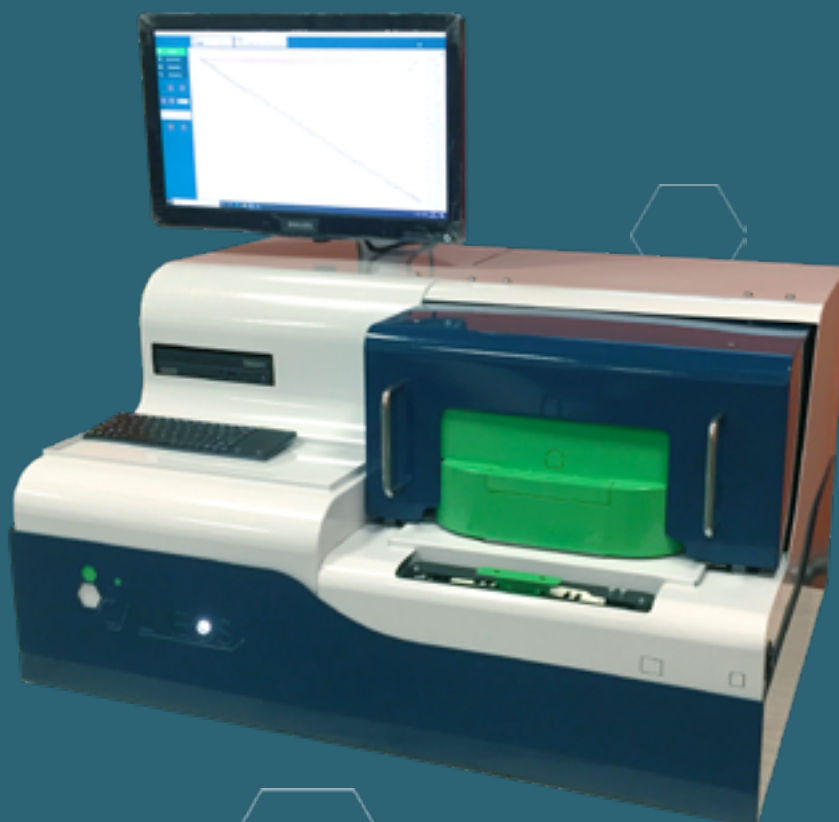
# CALNEOS

Skills in

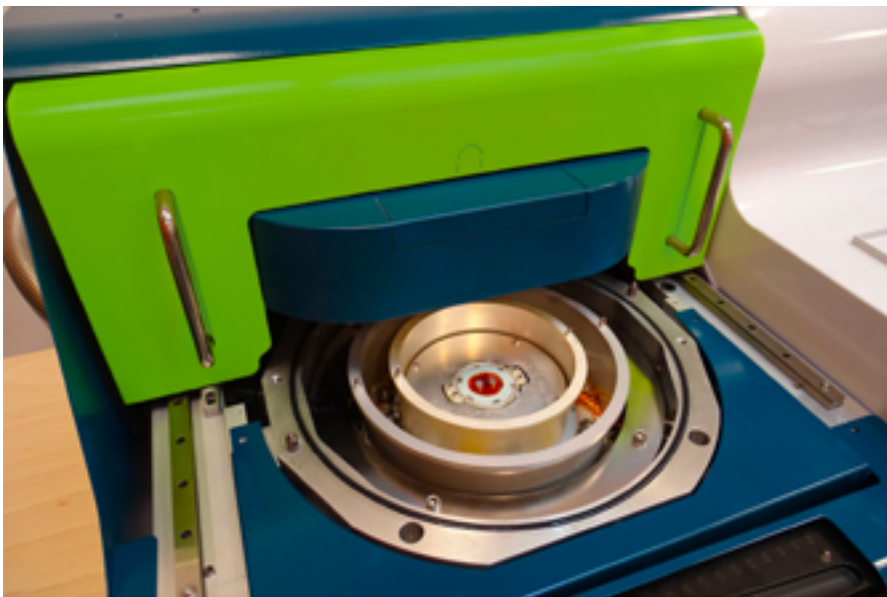
Basic research  
Applied research  
Design of new technologies  
in Calorimetry solution  
Services and support

## THE ULTIMATE DSC

Without any doubt, the most sensitive calorimeter on the market



# ULTIMATE DSC IS THE RESULT OF MANY YEARS OF FUNDAMENTAL RESEARCH



Ultra sensitive



High performance



Ultra simple

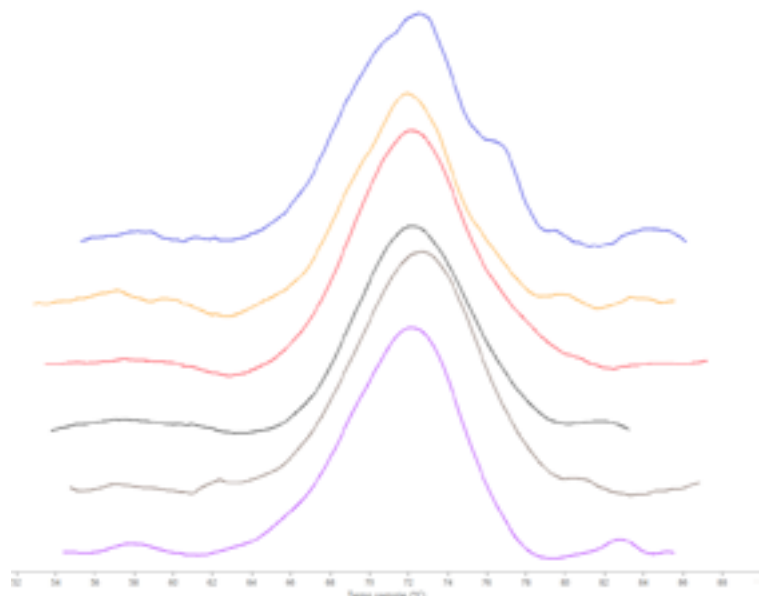


The Ultimate DSC's revolutionary sensor is based on patents from one of the most prestigious DSC research laboratories. Its remarkable and unmatched performance makes it the most sensitive device on the market.

These allow the Ultimate DSC to measure energy transitions as small as protein denaturation with minimal amounts of sample. A real revolution in the DSC market!

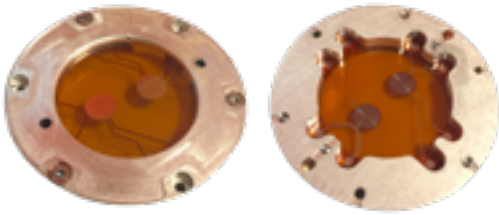
## DENATURATION OF LYSOZYME

- Heat Flow (mW/ $\mu$ g) - 98,4  $\mu$ g
- Heat Flow (mW/ $\mu$ g) - 70,6  $\mu$ g
- Heat Flow (mW/ $\mu$ g) - 60  $\mu$ g
- Heat Flow (mW/ $\mu$ g) - 40  $\mu$ g
- Heat Flow (mW/ $\mu$ g) - 29,5  $\mu$ g
- Heat Flow (mW/ $\mu$ g) - 20  $\mu$ g



## OPERATING PRINCIPLE

The sample is prepared in sealed extractable cells (crucibles). Different types of materials are available depending on the nature of the samples being analysed. A sample crucible and a reference crucible are then placed on the patented Ultimate DSC sensor.



This sensor, which is placed in a high-performance control system (also patented), can measure thermal effects as small as the denaturation of proteins.



The programming of the temperature ramp over a wide temperature range (-50°C to 160°C) will allow the measurement of phase transitions of all your samples in liquid, gel, solid form etc... Thanks to its 3 high performance regulation stages, the heating rates can be programmed up to 10°C / min: a unique feature for this kind of DSC.

## APPLICATIONS

In biochemical, biophysical or pharmaceutical research, proteins are an important subject in the development of new drugs or treatments. The stability parameters of these proteins are necessary for all these developments, so it is essential to know, for example, the denaturation temperature of the proteins as well as the energy required for denaturation (denaturation enthalpy temperature).

The technology most commonly used to access to these thermodynamic parameters is the differential scanning calorimetry (DSC). A major problem with this technology is the amount of protein used to obtain usable results: up to 1 ml per experiment for proteins that can be very expensive to produce.

Calneos has developed a calorimeter that allows less than 100 µL of sample, thus drastically reduces the amount used. The cells are extractable and no difficult and often unreliable cleaning procedures are required.

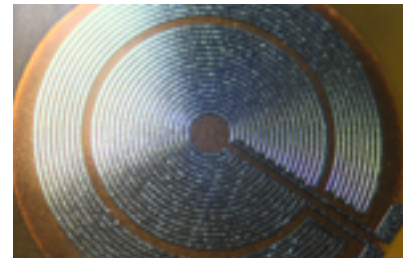
## SPECIFICATIONS

Temperature range \_\_\_\_\_ from -50 to 160°C  
Ramp speed \_\_\_\_\_ 0,001 to 10°C/min  
Control accuracy \_\_\_\_\_ 100µ°C  
Sample volume \_\_\_\_\_ 5 to 100µL  
Sensitivity \_\_\_\_\_ 550 µV/mW  
Unique features \_\_\_\_\_ Direct T sample measurement  
Joule effect calibration  
Equipment dimensions \_\_\_\_\_ L\*w\*h = 900\*700\*500 mm

## ULTIMATE DC

Unique features

- Low sample volume required (5-100µl)
- No cleaning procedure
- High scan rate (up to 10C/min)
- High concentration solution studies
- Solids and gels studies
- Easy to automate



## CONTACT

There's nothing better than a test to convince you : send us your samples !

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