LINSEIS
CALNEOS

UDSC L64

Ultimate DSC

WWW.LINSEIS.COM

Since 1957 LINSEIS Corporation has been delivering outstanding service, know-how and leading innovative products in the field of thermal analysis and thermo-physical properties.

Customer satisfaction, innovation, flexibility, and high quality are what LINSEIS represents. Thanks to these fundamentals, our company enjoys an exceptional reputation among the leading scientific and industrial organizations. LINSEIS has been offering highly innovative benchmark products for many years.

The LINSEIS business unit of thermal analysis is involved in the complete range of thermoanalytical equipment for R&D as well as quality control. We support applications in sectors such as polymers, chemical industry, inorganic building materials, and environmental analytics. In addition, thermophysical properties of solids, liquids, and melts can be analyzed.

Rooted in a strong family tradition, LINSEIS is proudly steered into its third generation, maintaining its core values and commitment to excellence, which have been passed down through the family leadership. This generational continuity strengthens our dedication to innovation and quality, embodying the essence of a true family-run business.

LINSEIS provides technological leadership. We develop and manufacture thermoanalytic and thermophysical testing equipment to the highest standards and precision. Due to our innovative drive and precision, we are a leading manufacturer of thermal analysis equipment.

The development of thermoanalytical testing machines requires significant research and a high degree of precision. LINSEIS Corp. invests in this research to the benefit of our customers.

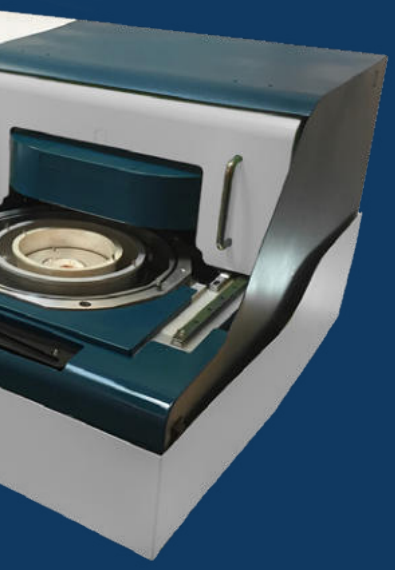
CLAUS LINSEIS

CEO DIPL. PHYS.

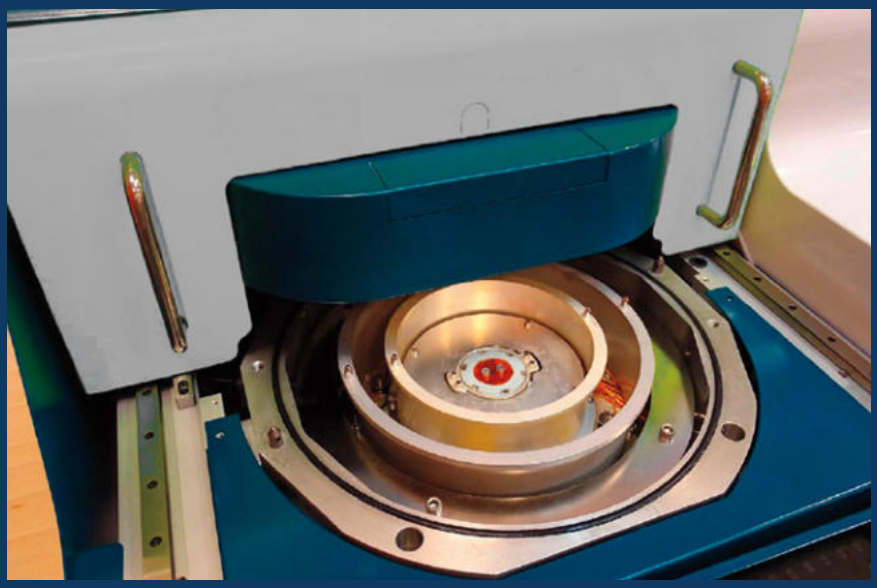
Engineering & Innovation

To strive for the best due diligence and accountability is part of our DNA. Our history is affected by German engineering and strict quality control.

We want to deliver the latest and best technology for our customers. LINSEIS continues to innovate and enhance our existing thermal analyzers. Our goal is to constantly develop new technologies to enable continued discovery in Science.

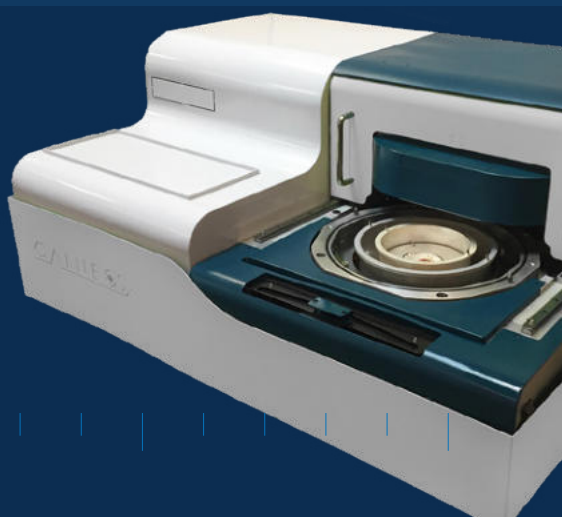


Ultimate **DSC**



- Ultra sensitive
- High performance
- Ultra simple

The **Ultimate DSC L64** 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



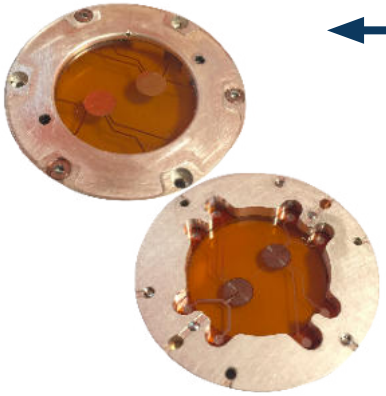
Operating **Principle**

1 SAMPLE PREPARATION

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.

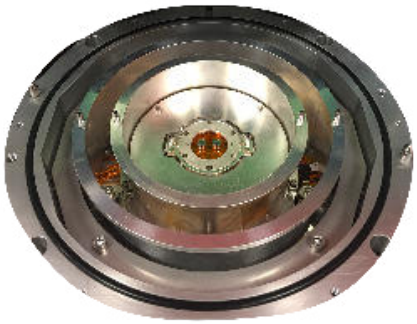
2 SET-UP

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



3 EXPERIMENT

The temperature ramp programming over a wide temperature range (-60 °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.



Technical **Specifications**

Temperature range	from -60 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 = 700*650*500 mm

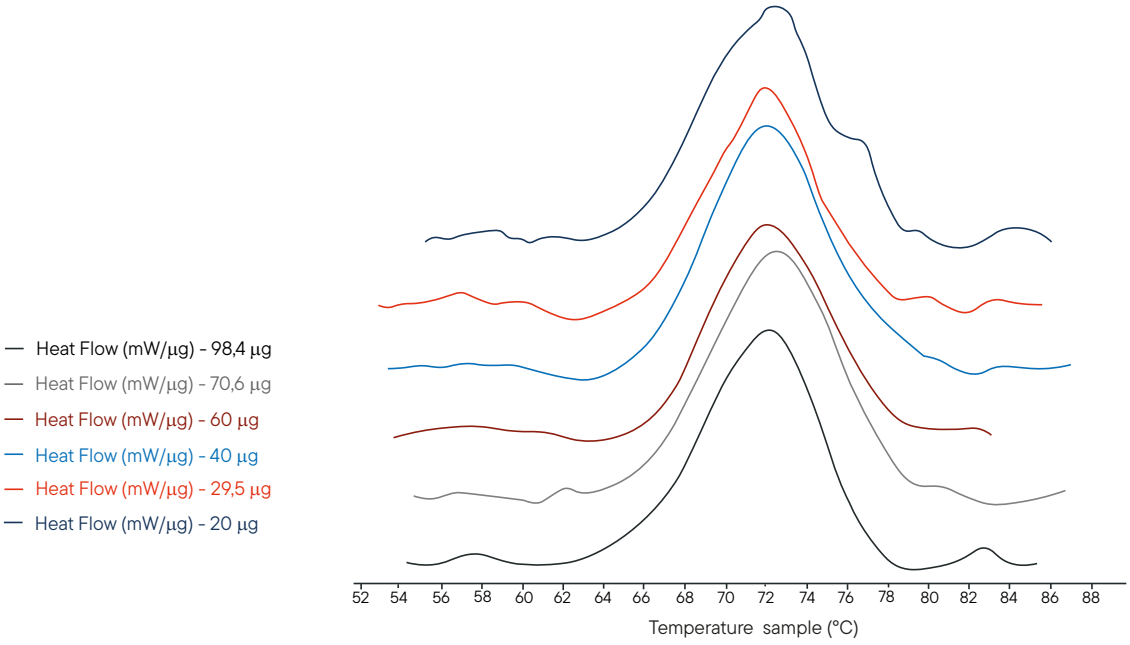
DSC L64

Unique features

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

Applications

DENATURATION OF LYSOZYME



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).
required.

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.

LINSEIS 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.

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