LINSEIS

CALNEOS

UDSC L64

Ultimate DSC-LT

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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.

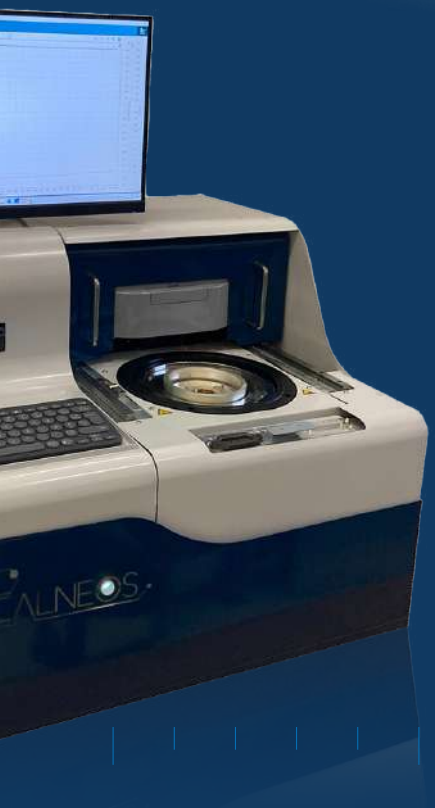
The development of thermoanalytical testing machines requires significant research and a high degree of precision. LINSEIS Corp. invests in this research to the benefit of our customers.

CLAUS LINSEIS
CEO DIPL. PHYS.

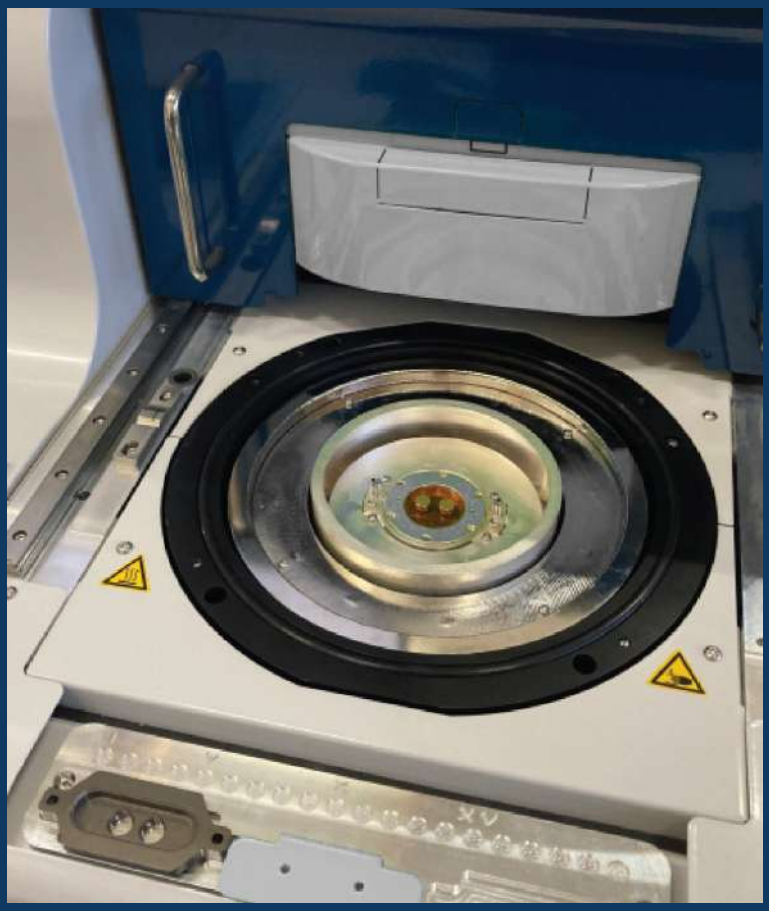
Engineering & Innovation

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-LT



- Ultra sensitive
- High performance
- Ultra simple

The revolutionary Ultimate DSC-LT (Low temperature) sensor is the result of patents from one of the most prestigious DSC sensor research laboratory. Its remarkable, unrivalled performance makes it the most sensitive device on the market.

Thanks to its exclusive cooling system, unique on the market, the Ultimate DSC pushes back the limits of science. Now you can start your tests at temperatures as low as -170 °C, without the use of liquid nitrogen.

A technological breakthrough that opens the door to a new world of experiments and possibilities.

Working **Principle**

An innovative System for sub-ambient temperatures: Stirling cryocooler

To reach temperatures of -170°C without consuming liquid nitrogen, the Ultimate DSC-LT uses a Stirling cryocooler device. This type of device uses mechanical oscillation to produce sufficient cold power to cool the Ultimate DSC-LT temperature control system.
The Stirling cryocooler device delivers cooling power to a cooling plate specifically designed to cool the oven volume of the Ultimate DSC-LT.

Thanks to this device, the Ultimate DSC-LT can regulate the temperature from -170 °C without any time constraints (it can work both in isothermal or in ramp mode).

Technical **Specifications**

Temperataure range	from -170 °C to 50 °C
Scanning ramp	0,001 to 3 °C/min
Precision of regulation	100µ °C
Sample volume	10 to 100 µL
Capture sensor	High sensitive patented sensor
Sensitivity	at 0 °C, 700 µV/mW at -150 °C, 300 µV/mW
Dimensions	L*d*h = 700*650*500 mm

ULTIMATE DSC - LT

Unique advantages

Exceptional sensitivity at very low temperatures:
up to 300 µV/mW.

- Isothermal down to -170 °C possible
- Simplified operation : no need for LN_2.
- high throughput with autosampler capability

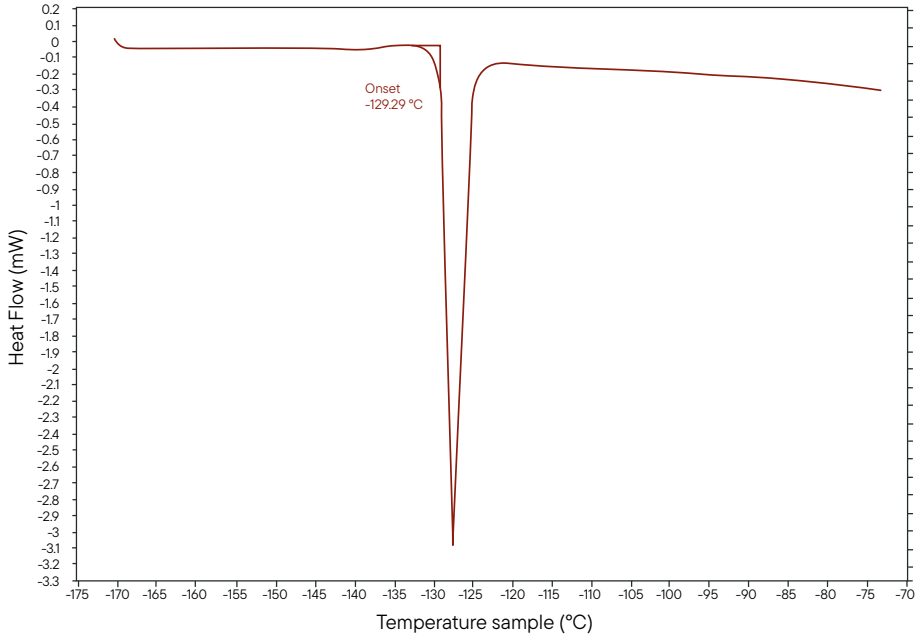
Applications

The Ultimate DSC-LT offers revolutionary performance for materials characterisation.
In many materials characterisation applications, reaching sub-ambient temperatures is essential, particularly for :

- Determining glass transitions in amorphous materials.
- The analysis of solid-solid phase transitions, particularly popular in pharmaceutical applications.

These studies often require restrictive cooling systems, with an almost systematic dependence on liquid nitrogen to go below -90 °C, a limit imposed by the cooling units of conventional DSCs.
With its innovative cooling system, the UDSC-LT is revolutionizing the field by overcoming this limit and completely eliminating the need for liquid nitrogen. Give your research unprecedented precision and simplicity.

Melting of Methylcyclohexane



LINSEIS GmbH Germany

Vielitzerstr. 43
95100 Selb

Tel.: (+49) 9287 880 0
E-mail: info@linseis.de

LINSEIS Inc. USA

109 North Gold Drive
Robbinsville, NJ 08691

Tel.: (+1) 609 223 2070
E-mail: info@linseis.com

LINSEIS China

Kaige Scientific Park
Room 120, Building T3, No.1220
Yuqiao Road, Pudong, Shanghai

Tel.: (+86) 61 90 12 03
Tel.: (+86) 50 55 06 42
E-mail: info@linseis.com.cn

LINSEIS India

Plot 65, 2nd Floor, Sai Enclave,
Sector 23, Dwarka05-800
110077 New Delhi

Tel.: +91-11-42883851
E-mail: sales@linseis.in

WWW.LINSEIS.COM

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