

TCS 120 | TCS 300

Temperature-controlled Sample Holder Units
with Unique Sample Holders

::: Innovation in Materials Science



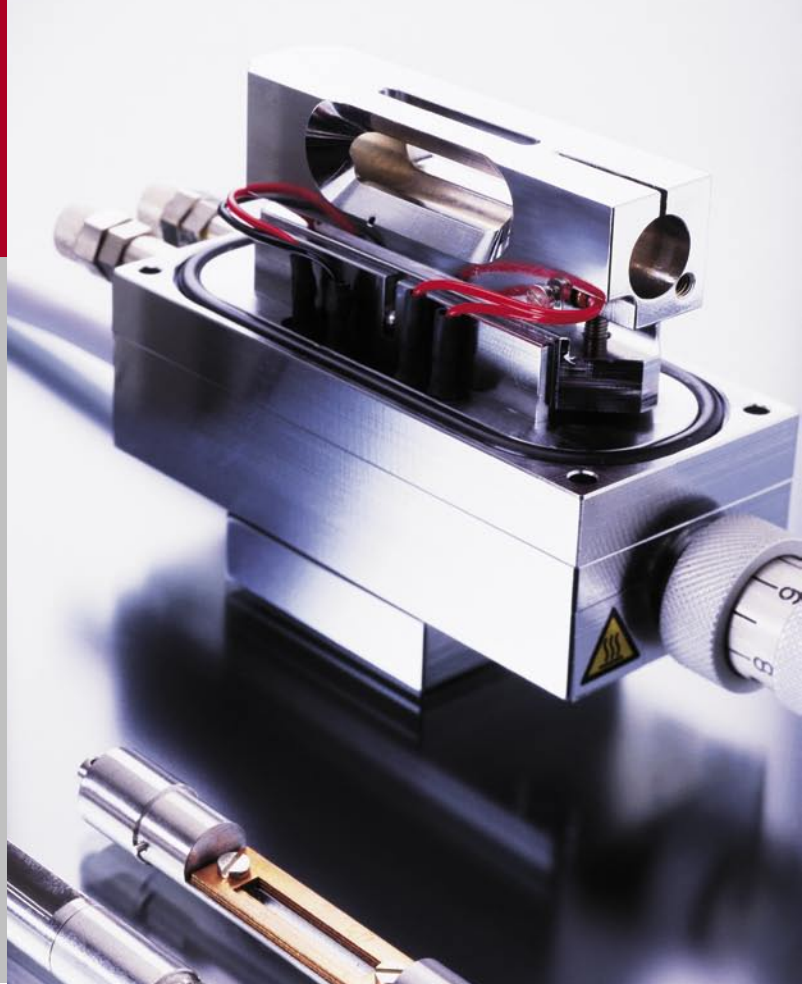
Temperature Control Can Be This Easy!

The TCS 120/TCS 300 temperature-controlled sample holder units are used for non-ambient small-angle X-ray studies in combination with the SAXSess Small-Angle X-ray Scattering system.

Samples can be investigated between -30 °C and 120 °C (TCS 120) and between room temperature and 300 °C (TCS 300).

A Pt 100 temperature sensor in the sample holder unit provides for precise temperature measurements.

The TCU 50 temperature control unit ensures exact temperature control of the sample (± 0.1 °C) and can be operated either manually or via a PC.



Clever sample holder designs

Different sample holder designs permit the measurement of almost any kind of samples including liquids, dispersions, powders, solids, gels, pastes, foils, and films.

	TCS 120	TCS 300
Temperature control with TCU 50		
Control accuracy	± 0.1 °C	± 0.1 °C
Control range	-30 ... 120 °C	ambient ... 300 °C
Temperature sensor	Pt 100	Pt 100
Heating	Peltier heating and cooling	Resistance heating only
Sample types	Liquids, dispersions, powders, gels, pastes, foils, films, ...	

Innovative Sample Holders

Reproduce the rare - the RotorCell

The RotorCell rotates the sample during the experiment, which prevents sedimentation or floatation in the samples. This is particularly important for experiments where long measuring times are necessary, e.g. during temperature scans.

Using the RotorCell is also of great benefit when micro-crystals are to be investigated and averaging of crystal orientations becomes an important issue.



Easy to handle – the Paste Cell

Highly viscous and gel-like samples can be handled with the Paste Cell. It allows easy filling and removing of the sample. The used plastic windows can be quickly exchanged to fit the specific experiment and temperature range up to 300 °C.



A unique tool for unique samples – the μ -Cell

The μ -Cell is a unique holder for the SAXSess to measure “precious” samples, such as proteins. It only requires a very small sample volume ($>7 \mu\text{L}$) and allows for recovery of the sample after the measurement.

Towards online measurement - the Flow Cell

The Flow Cell is a special sample holder for the measurement of flowing or frequently changing samples. The Flow Cell can be operated at temperatures up to 90 °C. It is particularly useful for continuous sampling from a reaction vessel or for studying kinetics or nucleation-and-growth processes.





Fotos: Croce Fotostudio



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