



xelsius

TEN REACTIONS $\rightleftharpoons$ ONE DEVICE

Customized Solubility & Crystallization Studies



XELSIUS Reactor and XELSIUS STS Solubility Test and Sampling

offering a wide range of features to measure, to analyse and to automate solubility and crystallization processes.

Choose the solution that fits to your task:

XELSIUS Reactor and XELSIUS STS are allowing rapid manual solubility analysis as well as fully automated solubility curves. According to your solid-liquid system you can do it with or without filtration. Flexible options are providing accurate and reproducible data for salts, sublimating and thermosensitive substances monitored by a turbidity probe.

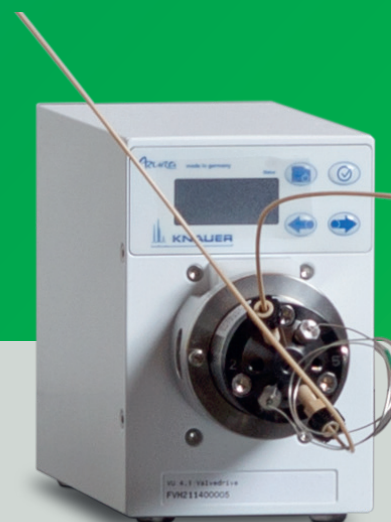
→ Solvent screening

→ Solvent and antisolvent studies

→ Solubility curves

→ Automated filtration

→ Turbidity monitoring

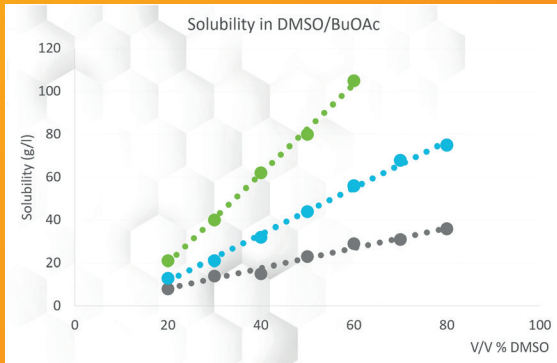






Fast Solubility Testing Based on Sedimentation

with XELSIUS Reactor and Kern DBS 60-3



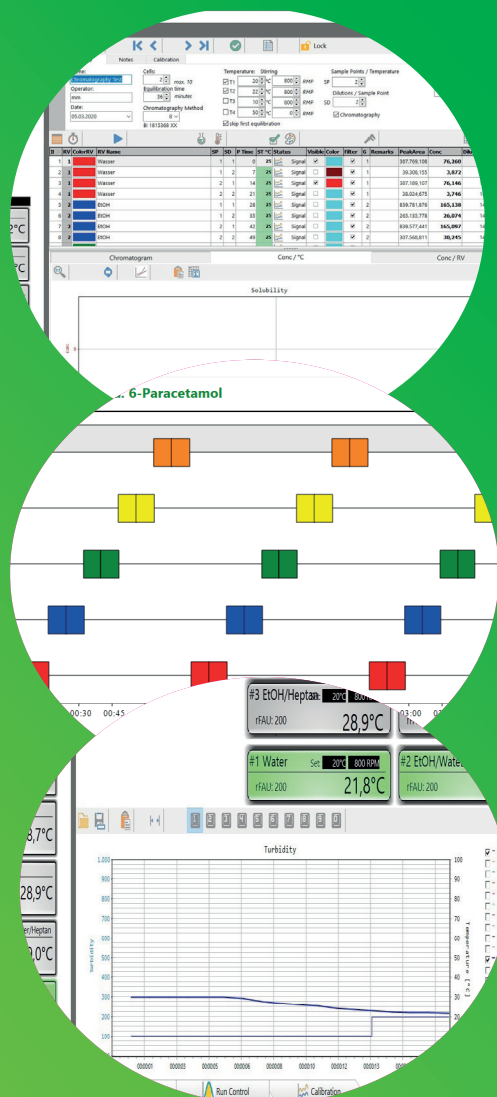
Easy and rapid solvent screening and solubility curves with XELSIUS reactor. Automated gravimetric analysis after sedimentation of temperature-equilibrated and saturated solutions with concentrations from 0,5 % to 50% or higher.

- Ten individual controlled cells
- Temperatures from -20°C to 150°C
- Accurate temperature +/- 0.1°C
- Sample volumes from 0,5 to 30ml
- Internal and external temperature monitoring
- Exportformat: csv, xls



Automated Solvent Screening Based on Filtration

with XELSIUS STS



Automated sampling and filtration to measure ten solubility curves at four temperatures in less than 3 hours.

Samples will be provided in HPLC vials for gravimetric or other external analysis.

Solubility Testing & Sampling Software

Create your solubility study with high flexibility. Observe your run in only one screen with all relevant data at a glance.

A pre-run /scheduler shows how your worklist will be proceeded.

Turbidity Measurement

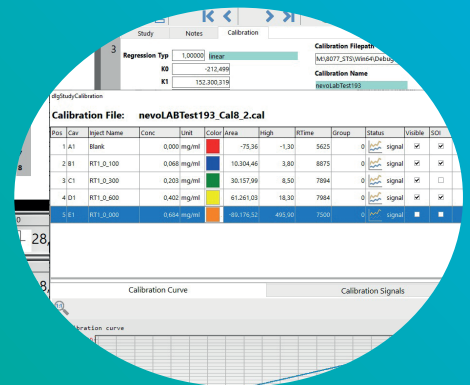
integrated into the STS System. Monitoring of turbidity signals of each sample in realtime by a fully integrated red light beam.

Fully Automated Solubility Curves and Online HPLC Analysis

with XELSIUS STS and HPLC UV-VIS integration

Online injection into HPLC UV-VIS via 6-port valve allows a fully automated determination of ten solubility curves over night.

Evaluated in a concentration range from 0,1 g/l up to 200 g/l.



Online HPLC Integration

- Sample injection by 6-port valve
- Signal recording from UV-VIS detector
- Autosave of signal data

Calibration and Reporting Tool

Working like a HPLC-Autosampler calibration standards could be injected with the same runtime method as the samples.

The software provides online single peak integration, post-run integration as well as a ready to use solubility diagram.



	Customized XELSIUS STS	XELSIUS Reactor
Art.Nr.	8077 100 001	8053 100 002
Dimension [T x B x H, mm]	Complete system: 560 x 500 x 630	Reactor : 360 x 165 x 150 Supply unit: 360 x 165 x 150
Weight	45 kg	25 kg
Power Input	1x 240 VAC, 50/60 Hz, 16 A 2x 240 VAC, 50/60 Hz, 2 A	1x 240 VAC, 50/60 Hz, 16 A
Chiller	Water / Glycol min. 1kW @ 0°C	
Temp	-20 °C - 130 °C	-20 °C - 150 °C
Vials	LV 13 mm	HV 24 mm LV with adapter
Volume	LV: 0,5 - 5 ml	HV: 1 - 20 ml LV: 0,5 - 5 ml
Sampling	automated about 4 Minutes / sample (external) about 8 Minutes / sample (HPLC UV-VIS) 144 @ 3 Temperatures 120 @ 4 Temperatures 1,5 ml HPLC Vials	manual 5 - 10 min / sample
Filtration	Filtration unit for LV Vials	Sedimentation
Turbidity	Transmitted red light 660 nm	
Analysis	grav. / external HPLC UV-VIS online	gravimetical, e.g. with KERN DBS 60-3
Concentrations	0,1 g/l - 100 g/l	1 g/l - 300 g/l
Effects	Sublimation (HPLC) Slurry (Filtration)	Sublimation (-) Slurry (-)
HPLC Connection	Injection port with 10-32 UNF thread Analog input 0-10 V	