DESIGNED BY SCIENTISTS FOR SCIENTISTS

Crystal 16

THE NEW INDUSTRY STANDARD

Advanced temperature features

- Integrated air cooling with extended temperature range. -20 – 150°C with all 4 block reactors in parallel
- Chiller cooling also available -25 – 150°C with all 4 block reactors in parallel
- Advanced temperature accuracy 0.5°C

State-of-the-art software

- New software with iimproved integrated research and analysis capabilities
- Flexible, intuitive, user-friendly software

Ground-breaking transmissivity technology

Increased accuracy with improved particle detection at low and high concentrations.

Feedback control

- Design your experiments with automated decision making
- Less time to automate your process; simplify nucleation time measurements

Overhead and bottom stirring

- Top stirring specifically developed to overcome attrition issues
- Bottom stirring for your most simple experiments

PRODUCT SHEET **CRYSTAL16**

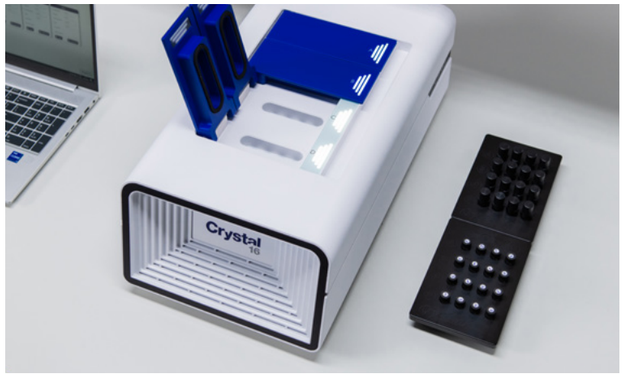
Technobis
CRYSTALLIZATION SYSTEMS

The NEW standard

Designed by scientists for scientists and used for more than 17 years by more than 600 customers, the ***Crystal16*** is the user-friendly multi-reactor benchtop system with simple, user friendly and flexible software to perform medium through-put crystallization studies at 1 mL scale. One ***Crystal16*** can hold up to 16 standard HPLC vials. The integrated transmissivity technology allows simple generation of phase diagrams ideal for a wide range of industries including pharmaceutical, chemical and agro-chemical companies.

"Mandatory for any physical chemistry or solid state lab!"

PhD student UC Louvain



"The user friendly Crystal16 enables me to rapidly acquire large datasets on solubility, MSZW's and induction times."

Project Leader at Ardena

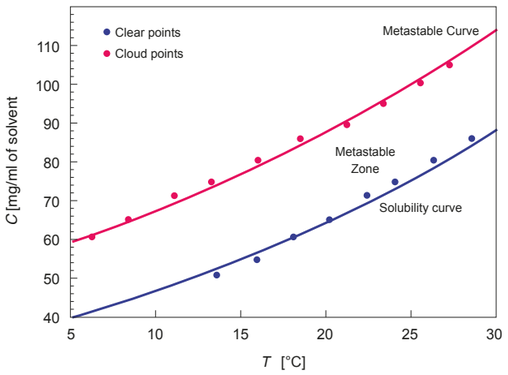
Temperature dependent solubility curves have never been easier

The ***Crystal16*** combines automation with integrated transmissivity technology allowing the scientist to easily determine clear and cloud points resulting in solubility data and metastable zone width (MSZW) at an early stage. The ***Crystal16*** can quite simply generate solubility curves for four solvents in 4 hours with less than 100 mg of material.

The increased accuracy of temperature control and the integrated transmissivity technology resulted in improved particle detection at low and high concentrations.

- **4 solubility curves in 4 hours**
- **Enabling the polythermal solubility method**
- **Obtain both solubility curve and MSZW information simultaneously**
- **Design crystallization process quickly**

Solubility of Cloxacillin Benzathine in pure solvents



"Expedited solubility curve development"

Manager Crystallization & Chromatography Tech at ADM

Induction time measurements and crystallization

The ***Crystal16*** has made kinetic nucleation studies accessible and easy to perform, by automating the collection of induction times for several samples simultaneously.

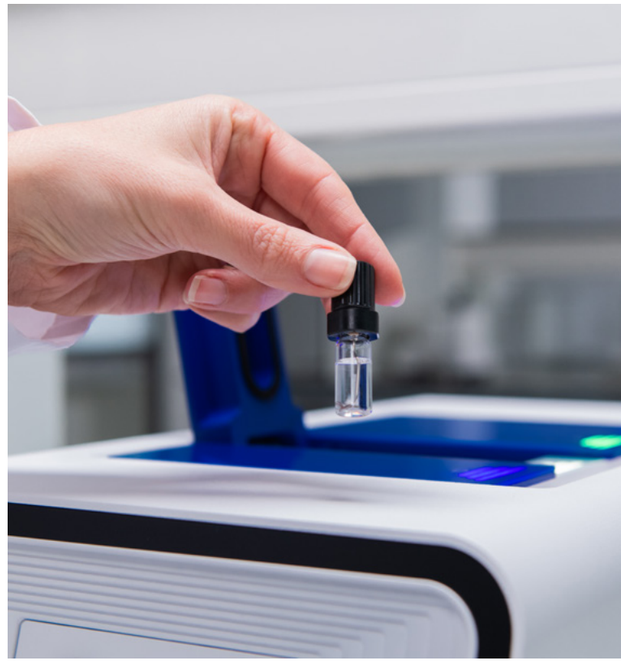
- **Measure theoretical approximations - determine experimentally the nucleation rate of any crystallization system**
- **The 'Crystal16 method' for determining nucleation rates from induction times**

"A thorough understanding of solubility is the key to process crystallization design. The Crystal16 is an essential tool in rapidly measuring the solubility of solids in various solvents as a function of temperature and hence is an invaluable instrument in pharmaceutical process development."

Principal Scientist MSD, Lead of Crystallization Lab

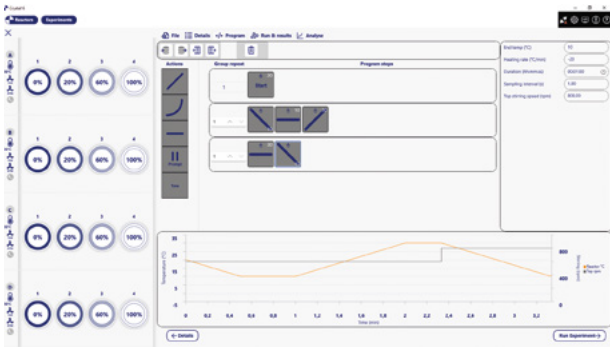
A powerful system for polymorph, salt & co-crystallization research

The ***Crystal16*** is a powerful system to simply use for polymorphism, salt or co-crystal formation. Using 16 parallel reactors, you can test a wide diversity of crystallization conditions such as solvents and solvent mixtures, compound concentrations, counter-ions, temperature profiles.



State-of-the-art software

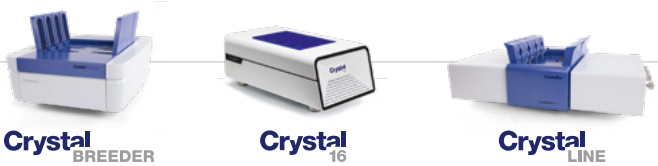
The new software with improved research and analysis capabilities is flexible, intuitive, and user-friendly. Now you can perform your experiments and analyse data simultaneously in the same environment. This is your all-round software!



Screenshot of the Crystal16 software

Specifications *Crystal16*	
Reactors	16
Reactor type	Commercially available, glass
Optimal work volume (mL)	0.5 to 1.0
Temperatures zones	4
Temperature Range (°C) **T ambient 20°C +-2°C**	-20 to 150 all 4 block reactors in parallel
Temperature accuracy (°C)	0.5
Heating rate (°C/min)	0 - 20
Cooling rate (°C/min)	0 - 20
Stirring	Overhead or stirrer bar
Stirring speed (rpm)	0 - 1250
Turbidity (%)	Every reactor
Chiller optional (°C)	Required to achieve -25 to 150 in all 4 block reactors in parallel
Data export	CSV, Word Report, XML
Footprint (DxWxH)	50x28x18.5

Technobis Crystallization Systems workflow



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