Crystal16

The next generation

Upgrade your crystallization screens with the next generation Crystal16 benchtop crystallization system.

Improve and accelerate your crystallization research with the Crystal16 parallel crystallizer, the ultimate instrument for research and process development. With 16 reactors at a volume of 1 mL, easily determine solubility curves and screen for crystallization conditions. Experience the tool being used by over 300 crystallization chemists.

New! Overhead stirring and software
Top stirring now available. Significantly reduce attrition issues. New software with improved research capabilities.

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

Advanced features
Integrated air-cooling. Eliminate the need for messy chillers or a house water supply. Extended temperature range from -15°C to 150°C.

Technobis
crystallization systems

Re-inventing the standard

Designed by scientists for scientists and used after 10 years by more than 300 customers, the Crystal16 is the user-friendly multi-reactor benchtop system with simple 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 turbidity sensor allows simple generation of phase diagrams ideal for a wide range of industries including pharmaceutical, chemical and agro-chemical companies.

Efficient determination of solubility curves

The Crystal16 combines automation with integrated turbidity measurement to determine clear and cloud points resulting in solubility data at an early stage with only a minimal amount of sample. The CrystalClear software assists in identifying clear points and automatically constructs and exports solubility curves. The Crystal16 can quite simply generate solubility curves for four solvents in short time with less than 100 mg of material. Phase diagrams needed for applications including co-crystallization studies can easily be generated.

### Metastable zone width determination made easy

The metastable zone width (MSZW) is defined as the zone between the solubility and nucleation curves. The turbidity measurement allows one to determine cloud and clear points and thus the MSZW. Using MSZW and the solubility curves, our users are able to significantly improve their crystallization processes.

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.
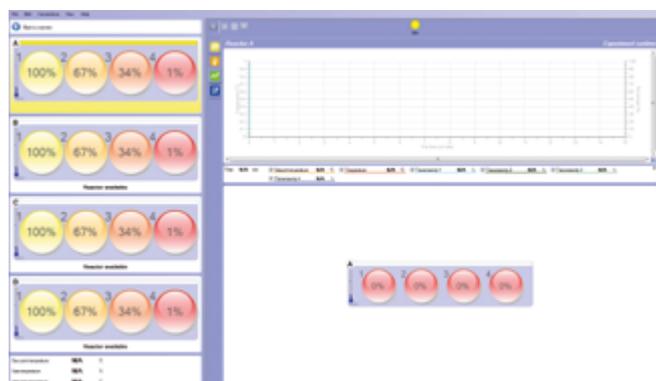
Solubility of Cloxacillin Benzathine in pure solvents*
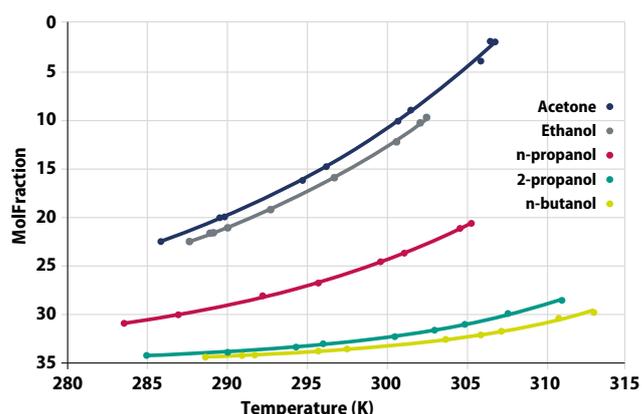
*J. Li, Z Wang, Y. Bao, J. Wang, *Solid-Liquid Phase Equilibrium and Mixing Properties of Cloxacillin Benzathine in Pure and Mixed Solvents*, Industrial & Engineering Chemistry Research, 2013, 52 (8), pp 3019-3026

Specifications	Crystal16
Reactors	16
Reactor type	Commercially available, glass
Optimal work volume (mL)	0.5 to 1.0
Temperatures zones	4
Temperature range (°C)	-15 to 150 *
Temperature accuracy (°C)	0.1
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 necessary	No
Data export	CrystalClear, Word Report, XML
Foot print (D x W x H in cm)	(49 x 28 x 20)

* When ambient temperature is 21°C ± 2°C, the minimum temperature reached in 1 block reactor is -15°C, and -10°C when all 4 block reactors are in use.

Also part of Technobis Crystallization Systems workflow

CrystalBreeder   *Crystalline*

Technobis
crystallization systems