


Crystal16™

SOMETIMES YOU NEED *JUST A LITTLE*

UPGRADE YOUR CRYSTALLIZATION SCREENS WITH THE NEXT GENERATION CRYSTAL16 BENCHTOP CRYSTALLIZATION SYSTEM.

Improve and accelerate your crystallization research with the Crystal16TM parallel crystallizer, the ultimate instrument for research and process development. With 16 reactors at a volume of 1ml, easily determine solubility curves and screen for crystallization conditions. Experience the tool being used by over 200 crystallization chemists.

Technobis

crystallization systems

Crystal16™

NEW

Overhead stirring.
Integrated air-cooling. Eliminate the need for messy chillers or a house water supply.
Extended temperature range from -15C to 150C.
New software with improved research capabilities

IMPROVE AND ACCELERATE YOUR CRYSTALLIZATION RESEARCH

Designed by scientists for scientists, the Crystal16TM is a user-friendly multi-reactor benchtop system with intuitive software to perform medium through-put crystallization studies at a 1-mL scale. One Crystal16TM 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.

RE-INVENTING THE STANDARD

After more than five years of success in over 200 customers, the Crystal16 is the world's most used equipment for solubility curves and phase diagrams. The new Crystal16 maintains its intuitive design, and now incorporates a revolutionary air-cooling system, overhead stirring and a new software platform extending its research applications.

EFFICIENT DETERMINATION OF SOLUBILITY CURVES

The Crystal16TM 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 system can quite simply generate solubility curves for four solvents in under four hours with less than 100 mgs of material. Based on this information, phase diagrams needed for applications including co-crystallization studies can easily be generated.

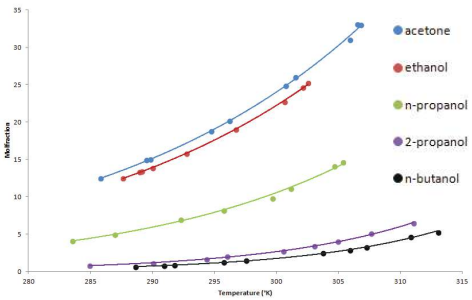

Figure 1: Solubility of Cloxacillin Benzathine in pure solvents*.
*Jieqiong Li, Zhao Wang, Ing Bao, Jinkang Wang, *Solid-Liquid Phase Equilibrium and Mixing Properties of Cloxacillin Benzathine in Pure and Mixed Solvents*, Industrial & Engineering Chemistry Research, 2013, 52 (8), pp 3019-3026

METASTABLE ZONE WIDTH DETERMINATION MADE EASY

The metastable zone width (MSZW) is defined as the zone between the solubility curve and the metastable limit curve. The Crystal16TM is the smallest scale commercial crystallizer with integrated turbidity measurement 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 CRYSTALLIZATION SCREENING

Simplify screening for solvent selection, polymorphs or salts with fast screening of crystallization parameters in 16 parallel reactors with volumes as low as 0.5mL each. Testing a wide diversity of crystallization conditions such as solvents and solvent mixtures, compound concentrations and counter-ions at varied temperature profiles, the Crystal16TM offers a flexible experimental setup for rapidly identifying hits.

SPECIFICATIONS	CRYSTAL16®
REACTORS	16
REACTOR TYPE	Commercially available, glass
OPTIMAL WORK VOLUME (ML)	0.25 to 1.5
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 stir bar
STIRRING SPEED (RPM)	0—1250
EVAPORATION OPTION	No
TURBIDITY (%)	Every reactor
CHILLER NECESSARY	No
FOOT PRINT (DXWXH)	(49X28X20)

DISCOVER, SCREEN AND OPTIMIZE

The Crystal16 is further complemented the workflow by the CrystalBreeder and Crystalline. Discover new polymorphs, salts or single crystals with the world's smallest reactor system, the **CrystalBreeder**. Optimize your crystallization process with integrated turbidity, cameras and raman in a small volume reactor system, the **Crystalline**. Combine the crystallization systems in a flexible configuration to optimize solid-state success!

Technobis crystallization systems

FOR MORE INFORMATION CONTACT US AT INFO@CRYSTALLIZATIONSYSTEMS.COM OR +31 (0)72 3020040
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