## **Accelerate Process Development**

# with Easy-to-Use Unit Operation Modeling



#### Right-First-Time Scale-up

Dynochem enables scientists and engineers to predict the process performance on scale-up from lab to pilot plant and manufacturing. Users experience a higher success rate for scale-up and smooth, digital technology transfer between sites.



### **Extensive Model Library**

Dynochem Resources is a comprehensive library of API reaction, workup and isolation models, which delivers powerful simulations to all levels of users in every project. An extensive library of user knowledge and know-how makes it possible to learn from the community, building further expertise on modeling.



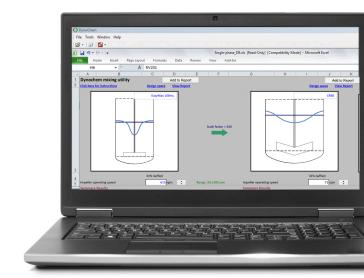
## Optimization with Fewer Experiments

Combining data with equipment characteristics enables the calculation of optimal process conditions and equipment utilization in batch and flow operations. Using these methods in tandem makes it possible to deliver better process using fewer overall experiments.



#### **Expert Support**

A global team of expert scientists and engineers delivers project support and training to users around the world to ensure their success. A regular series of training and seminar events provides the opportunity to network with users across industries and learn best practices from peers and Dynochem experts.



## O Dynochem®

Dynochem is the world's leading unit operation modeling and scale-up (prediction) software for scientists and engineers working in the pharmaceutical and fine chemical industries. Used extensively from drug substance process development and into primary manufacturing, Dynochem provides a simulation and modeling platform for process optimization, trouble-shooting and calculating right-first-time scale-up parameters.



## **Right-First-Time Scale-up**

with Easy-to-Use, Predictive Modeling

- Easy-to-learn modeling tools covering API reaction, workup and isolation steps
- Developed to work with everyday data in API process development workflows
- Designed for use with standard equipment used in process development and primary manufacturing
- Step-by-step guidance, user training and expert project support
- Deployable on any PC or laptop running Windows 8 or higher
- Open data architecture to facilitate optimal use and re-use of all available data streams

## Dynochem template models include:

- Mixing and Heat Transfer in stirred tank reactors
- Reactions in batch and semi-batch reactors
- Binary and Ternary phase equilibria
- Batch distillation and solvent swap
- Crystallization
- Filtration & centrifugation
- Drying
- Common operations in continuous processing such as:
  - Mixing and Heat Transfer in PFRs
  - Reactions in CSTRs and PFRs
  - Crystallization in CSTRs
  - Counter-current extraction
  - Wiped-film evaporator

## Scale-up Suite

Scale-up Suite is the world's leading drug substance process development and scale-up software for scientists and engineers working in the pharmaceutical industry.

## O Dynochem

Accelerating Chemical Process Development



## O Dynochem Biologics

Accelerating Bioprocess
Development



## Reaction Lab

Accelerating Reaction Optimization



### **METTLER TOLEDO Group**

Automated Reactors and In-Situ Analysis Local contact: www.mt.com/contacts www.scale-up.com

For more information

Subject to technical changes
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