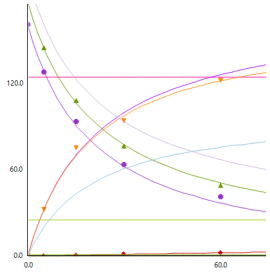
Scale-up Suite

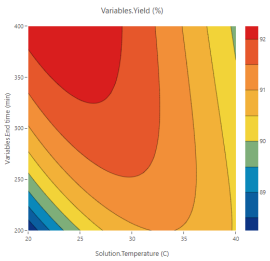
Predict Reaction Performance

with Easy-to-Use Kinetic Modeling



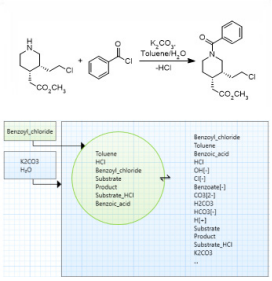
Avoid Unnecessary Experiments

Reaction Lab supports an efficient, innovation-driven process development workflow centered around transforming high-quality data into unique process understanding. A library of kinetic models enable exploration of the design space without running multiple experiments.



Optimize Reaction Performance

Through kinetic modeling, an in-depth understanding of the reaction yield, selectivity and catalyst deactivation is achieved. This characterization can reveal new opporutnities for process optimization which can be run in-silico and verified in the lab.

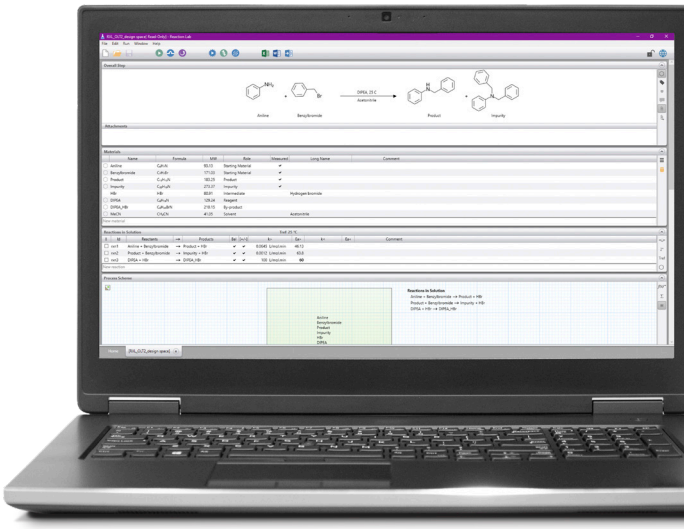


Speed Development

Reaction Lab makes modeling the impact of critical process parameters on reaction kinetics fast and easy. This understanding can then be leveraged to deliver first-right-time campaigns of the expected yield and quality.

Explore New Technology

Kinetic models developed in batch conditions can be used to investigate running a process at scale in traditional batch reactors or in alternative technologies, such as flow reactors, without having to buy and install new equipment.



Reaction Lab™

Reaction Lab is an easy-to-learn kinetic modeling platform developed for chemists working in API process development who have no previous modeling experience. Reaction Lab builds and solves the necessary equations, allowing users to focus on understanding their chemistry. The powerful modeling tools in Reaction Lab include modules for kinetic fitting, running "what if?" simulations, automated optimization and exploring the "design space" in-silico.

METTLER TOLEDO

Predict Reaction Performance
with Easy-to-Use Kinetic Modeling

- Easy-to-learn modeling environment
- Integrates with information from ELN and common chemist tools such as ChemDraw®
- Works with any time-series data, such as IR or HPLC
- Expert training and support
- Deployable on any PC or laptop running Windows 8 or higher
- Localized to Chinese, Japanese and Korean languages
- Open data architecture to facilitate optimal use and re-use of all available data streams

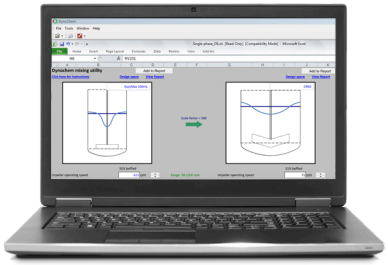
Reaction Lab template models include:

- Biphasic liquid-liquid reaction (e.g. Schotten-Baumann Reaction)
- Biphasic solid-liquid reaction (eg. Diels-Alder Reaction)
- Catalytic Hydrogenation (e.g. Nitrile Reduction)
- Dehydration (e.g. Deprotonation of a Diprotic Acid)
- Feb-batch telescoped reaction (e.g. Wittig Olefination)
- Heck Reaction
- Heterogeneous solid-liquid reaction (e.g. Aldol Condensation)
- Mitsonubu Reaction
- pH Sensitive Reaction (e.g. Amine Acylation)
- Phase Transfer Catalysis
- Suzuki Coupling

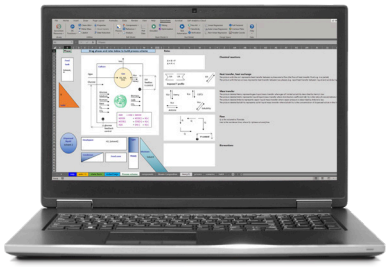
Scale-up Suite

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.

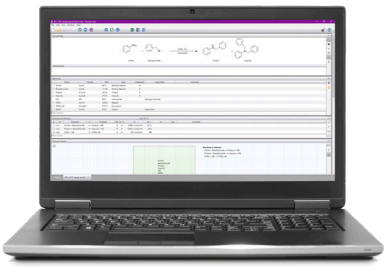
Dynochem
Accelerating Chemical Process Development



Dynochem Biologics
Accelerating Bioprocess Development



Reaction Lab
Accelerating Reaction Optimization



METTLER TOLEDO Group
Automated Reactors and In-Situ Analysis
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www.scale-up.com
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