



Scale-up Chemistry

Developing robust and cost-effective chemistry processes

The BioDuro Advantage

BioDuro is a global provider of reliable, high quality chemistry services. We provide services ranging from early discovery chemistry to kilogram quantity process chemistry to deliver comprehensive and flexible solutions to your synthesis challenge. Our scale-up team is committed to guaranteeing repeatability and reliability of your synthetic route while minimizing cost and maximizing safety by adhering to SOPs and best practices. Every project is unique, and we take pride in developing unique solutions, while keeping your IP safe, in order to maximize chances of your success.

Small Molecule Process Chemistry and Scale-up Capabilities

BioDuro is committed to supporting your preclinical discovery chemistry efforts from lead optimization and scale-up of chemical intermediates to the synthesis of non-GLP tox lots and process development. Our process chemistry and scale-up operations are overseen by an experienced team of chemists used to overcoming synthetic challenges using methodical and creative approaches. From bench scale to pilot scale, we develop robust synthetic routes within aggressive timelines. Our commitment to scale-up chemistry includes the recent addition of a modern scale-up lab at our Shanghai facility.



Small-molecule chemistry and scale up services (up to 5 kg):

- Synthesis of NCEs, intermediates, building blocks, or reference compounds
- Preparation of impurity standards and metabolites
- Synthesis of non-GMP tox lots and clinical materials
- Experience with air-sensitive reactions
- Experience with challenging transformations
- Capability to run reactions from -70 °C to +200 °C

Process discovery, development, and optimization:

- Optimization of reaction conditions
- Development of robust and scalable synthetic routes
- Reference standard preparation
- Impurity characterization and management
- Differential Scanning Calorimetry (DSC)
 - Crystallinity and polymorph characterization
 - Reaction hazard screening

Capabilities



Shanghai China

- 6 walk-in hoods, ~80 linear feet hood space
- 20L and 50L temperature controllable jacketed glass reactors
- Rotary Evaporators 20L, 50L with chiller
- Capability to run reactions from -70 °C to 200 °C
- Vacuum Drying Oven, temperature range= rt - 200 °C, Chamber size 0.63*0.81*0.845m
- Drying Oven, temperature range= rt - 200 °C, Chamber size 0.77*0.97*1.1m
- DSC (TA, Q20)



Beijing China

- 7 walk in hoods, ~100 linear feet hood space
- 10L to 50L temperature controllable jacketed glass reactor
- 50L Separatory Flask
- Rotary Evaporators (2 X 20L) with chiller
- 5L Autoclave (Parr, 4500 Floor Stand Reactor)
- Waters Breeze™ 2 HPLC system
- Combi-Flash, TORRENT (up to 3 kg cartridge)

Standard Operating Procedures and Best Practices

At BioDuro we are committed to conducting our work through rigorous scientific approaches and IP sensitive practices. As part of that commitment, we will strictly adhere to SOPs and Best Practices covering topics including:

- Risk assessment
- Process development procedures
- Facility and equipment management
- Kilo-lab regulations