

# Continuous Flow

## Expertise

Building on our multi-decade industrial experience, Cambrex offers continuous flow process development services to provide our customers with route scouting, process development, process optimization, or scale-up and commercialization depending upon the stage within a program's lifecycle.

The benefits of our continuous flow process development services include:

- Enhanced purity and product quality through improved control
- Improved process safety, especially with toxic or energetic chemistries
- Ability to access and utilize extreme or exotic process conditions
- Lower operating costs
- Ability to incorporate constant real-time analytics
- Reduced process mass intensity
- Development of chemistry on a commercial-ready skid

Our team of experts can assess processes for suitable application of continuous flow culminating in the custom development of processes incorporating proof-of-concept to cGMP manufacturing and commercialization.

## Capabilities

- Reaction kinetics screening
- Reaction condition development & optimization
- High pressure & high temperature capabilities
- Extreme cryogenic capabilities
- Multi-phase system capabilities
- Critical parameter identification
- Assessment of process analytical technologies (PAT) for monitoring & control
- Capture & provide robust process data packages to support further development
- Analytical method development & integration into continuous flow process
- Development of process-specific control & regulatory strategy
- Development of continuous extraction/separation/crystallization
- Incorporation of in-line wet milling to control particle size
- Telescoping of multiple continuous flow steps/unit operations
- Integrating individual flow steps within traditional batch processing
- Development of novel technologies & equipment to support client process needs
- Process-specific equipment design to maximize throughput, quality and scalability
- Process optimization & technology transfer
- Proof-of-concept & engineering campaigns
- Scale-up & manufacturing



## Capability Highlights

- High-performing technical team
- Rapid response and feasibility screening
- In-house process design and equipment fabrication expertise
- Demonstrated cGMP clinical production campaigns from 100g to 100kg
- Site-to-site scale-up & tech transfer for commercialization

## About Cambrex

**Cambrex is a leading global contract development and manufacturing organization (CDMO) that provides drug substance development and manufacturing across the entire drug lifecycle, as well as comprehensive analytical and IND enabling services.**

With over 40 years of experience and a team of 2,000 experts servicing global clients from North America and Europe, Cambrex offers a range of specialized drug substance technologies and capabilities, including continuous flow, controlled substances, liquid-phase peptide synthesis, solid-state science, material characterization, and highly potent APIs.