

Voyager Specifications	
Pumping System	Peristaltic
Temp. Measurement	Fiber-optic or IR
Pressure Measurement	In-line, direct
Operating Limits	220 °C or 200 psi
Flow Cells	80-mL Glass
Valves	Two, (4,6 ported)
Solvent Level Sensors	Two

Voyager™

*Microwave Synthesis System
for Scale Up & Process Development*

Voyager is also a highly efficient tool for screening reaction process parameters. Quickly and effectively screen catalysts, study reaction kinetics, and explore potential solvents with Voyager to put your scale-up process development on the fast track. Additionally, with Voyager's flow-through design and constant reaction monitoring, there isn't a safer process-screening tool available.

Take your chemistries to the next level! Voyager is available with seamlessly integrated online analytics to optimize the scale-up process, bringing real-time results and control to flow-through chemistries.

- **CEM Investigator™ in situ spectroscopic analysis module**
- **Use standard HPLC, LC-MS or Flash Chromatographic systems for in-line analytical examination of the flow stream**

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CEM

From milligram to kilogram quantities! Voyager™ provides unparalleled flexibility in a stop-flow system designed to easily accommodate liquid, solid, or viscous reactants.

- Stop-flow accessory for reactions with solid reagents
- Powerful flow-handling capability
- Scale-up from mg to kg with the same parameters and achieve the same yields
- Use liquid, solid, or viscous reactants

Voyager is the first single-mode microwave flow-through system designed for scale up.



Built on the most innovative microwave synthesis platform available, the Voyager System shares all of the features and capabilities of CEM's Discover® System, while offering additional options and accessories for scale-up. Though Voyager can perform discovery scale chemistries and subsequently scale them up, methods developed on a small scale with any synthesis system featuring CEM Focused™ Microwave technology may be transferred to Voyager for scale up, without the headaches of long process optimization.

Voyager Capabilities	
Particle Size	>200 micron
Viscosity	>100cp
Atmospheric or pressurized reactions	✓
Temperature Control	✓
Pressure Control	✓
Liquid Starting Materials	✓
Active Flow Cells	✓
Solid Starting Materials/Products	✓
Recirculating Flow Cell	✓
Automated Flow-Through Synthesis	✓
Integrated Analytics	✓
Kinetic Studies	✓
Purification	✓
Optimization of Conditions	✓
Fractional Collection	✓

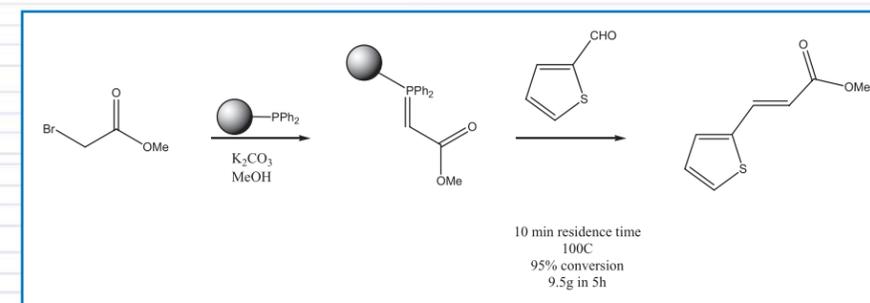
Voyager is the first technology that provides applications specific design that satisfies the need to scale up reactions with microwave energy in a safe, controlled, and consistent manner. Voyager also offers a flexible scale-up technology that is a viable alternative for the production of valuable intermediates or the timely creation of starting materials in the lab, meaning that medicinal chemists can now better manage their development projects directly without waiting for outsourced reactants or components.



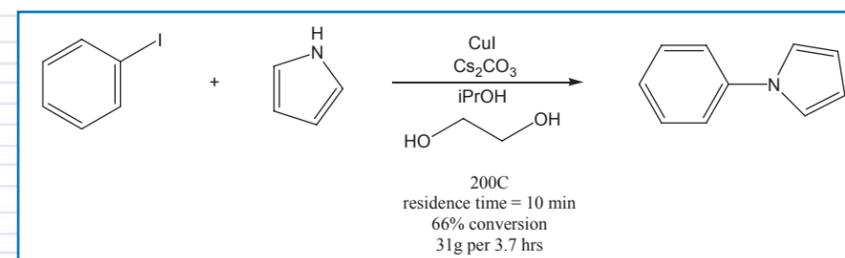
The Right Tools for Your Chemistries

Voyager covers the entire range of scale up applications commonly encountered in synthetic chemistry. Scaling up reactions is neither trivial, nor routine, and one tool rarely allows the flexibility and versatility to encompass the full range of chemistries one is faced with in process research applications. Voyager provides simple-to-configure components that are easily redefined based on your application need, so that you spend more time developing your chemistry and less time putting together lab apparatus.

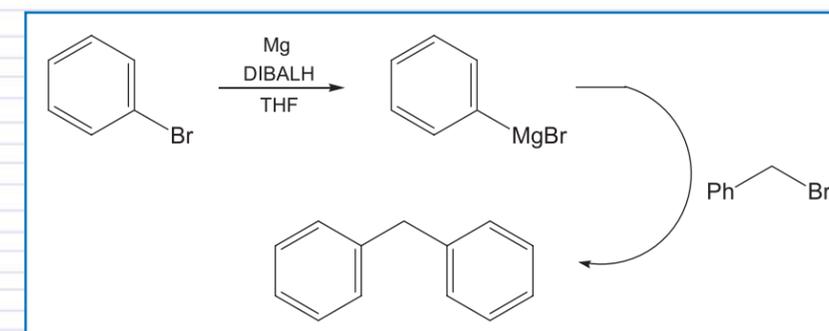
- 80-mL vessel for stop-flow reactions – up to 220 °C or 200 psi
- Patented stirring technique
- Patented clog detection with automated recovery
- Leak detection
- Flow detectors
- Run reactions under inert conditions



Wittig Reaction



Buchwald Reaction



Grignard Reaction

The Voyager series provides the first microwave answer for synthesizing kilograms of product. This technology easily handles a number of different purification solutions and provides access to on-line analytical solutions to streamline the scale-up process.