

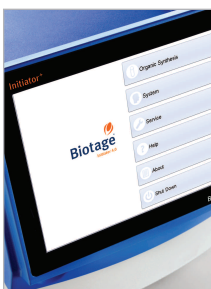
# Initiator<sup>+</sup>

## Microwave Synthesizer



### Rapid, Microwave-Assisted Organic Synthesis for Processing and Method Development

The **Biotage® Initiator<sup>+</sup>** represents a new generation of instruments for organic, medicinal, materials, nano and polymer chemistry professionals. It is an upgradable and reliable platform for chemists to make great discoveries.



The Initiator<sup>+</sup> is a flexible system that utilizes all Biotage vials, from 0.2 to 20 mL, in any order or combination, at any time without system modifications, delivering greater flexibility and direct scale-up from milligrams to grams.

Initiator<sup>+</sup> can also be upgraded with automation solutions to achieve higher throughput to save time and cost.

#### Features and Advantages

- 300 °C reaction temperature
- 30 bar reaction pressure
- In situ temperature measurement
- Upgradable to run peptide synthesis
- Large 10" touchscreen
- Modular automation solutions
- Guided step-by-step Wizard
- Safe and simple

#### Flexibility

Higher temperatures and pressures of up to 300 °C and 30 bar open new possibilities to perform difficult reactions. This allows for more flexibility in choosing a solvent. Even low boiling point solvents can now be run at higher temperatures. Using "Regulate on pressure" enables the reaction to reach highest possible temperature during the run. With the addition of the optional fiber optic probe, it is possible to measure the reaction temperature inside the vial for a higher degree of control.

#### Upgradable

Upgrade from an Initiator<sup>+</sup> by connecting the SP Wave peptide synthesis module and the Robot Eight kit to perform microwave assisted peptide synthesis with vortex mixing to ensure homogeneous heat distribution.

#### Easy to operate

The large touch screen display provides an easy-to-use experience from set-up to results. By using the Biotage Wizard, the user is guided through the set-up of experiments step-by-step. It also includes assistance in converting conventional conditions to microwave synthesis parameters.

#### Modular

The modular design allows a user to add on different automated sample processors dependent on throughput requirements.

#### Safe

The reaction vessel is secured with a triple-tier safety lock to ensure maximum operator safety at all times. This in combination with high grade aluminum and a safe explosion box ensures maximum operator safety, even at high temperature and pressure.

## Specifications

### Heating process

Temperature range	40–300 °C <sup>1</sup>
Temperature increase	Typically 2–5 °C/sec depending on solvent and power applied
Reaction time	Up to 96 hours. Typically, most reactions require 2–15 minutes of irradiation.
Pressure range	0–30 <sup>2</sup> bar (2 MPa; 290 psi)
Power range	0–400 W from magnetron at 2.45 GHz
Reaction volumes	0.2–20 mL
Agitation	Variable magnetic stirrer (300–900 RPM)

### Sample Processor

Upgradable with Robot Eight / Robot Sixty  
Processing capacity 8 vials / 60 vials  
Rack capacity (large) 2x2 vials / 2x12 vials  
Rack capacity (small) 2x4 vials/ 2x30 vials



### System requirements

Temperature	Operating Temperature: 18–32 °C Storage and transportation temperature: -25 °C to 60 °C
Humidity	20–95% at room temperature
Electrical supply	Europe: 220–240 V~, 50 Hz (5 A) US and Japan: 100–120 V~, 50/60 Hz (10 A)
Maximum power consumed	1100 VA
Cooling	Pressurized air supply: >60 L/min (2.1 cubic feet/min), 2.5–4.0 bar (0.25–0.40 MPa; 36–58 psi)
Weight	Initiator+: 21 kg (48.5 lbs)
Dimensions (WxDxH)	Initiator+: 365 x 422 x 421 mm (14.4" x 16.6" x 16.6")
Max sound level	70 dB(A)

### Interfaces

Touch screen	10.4"
Ethernet LAN	Complies with IEEE 802.3 (ANSI 8802-3)
USB	USB 2.0
Archiving/back-up	Via USB
Printing	Via LAN

### Upgrade Path

The Initiator system can be upgraded to an automated 8- or 60-position system. It can also be equipped with the SP Wave Module for an automation solution for peptide chemistry, complete with vortex mixer and liquid handling.

### Certifications

CE, CSA certified

<sup>1</sup>Temperature range is limited to 40–250 °C for the 10–20 mL vessel

<sup>2</sup>Pressure range is limited to 0–20 bar for the 10–20 mL vessel

## Ordering Information

Part Number	Description
356006	Initiator+ Microwave System (EU)
356007	Initiator+ Microwave System (USA/JPN)
355380	Robot Eight for Initiator System
355381	Robot Sixty for Initiator System
356014	Initiator+ Microwave Peptide System (EU)
356015	Initiator+ Microwave Peptide System (USA/JPN)

### Optional Accessories and Consumables

355458	Microwave Vials 0.2–0.5 mL, (qty 100)
352016	Microwave Vials 0.5–2 mL, (qty 100)
351521	Microwave Vials 2–5 mL, (qty 100)
354833	Microwave Vials 10–20 mL, (qty 50)

## Related Products



### Isolera

The Biotage® Isolera family of flash purification systems, enables chemists to easily achieve better separations. Collect fractions using two wavelengths, adjust the flow rate from 1 to 200 mL/min as needed and use up to four solvents in a single gradient, for maximum purity and yield.



### Initiator+ SP Wave

The Biotage Initiator+ SP Wave is a programmable synthesizer that can be configured to perform either microwave assisted peptide or organic synthesis.

### NORTH AMERICA

Main Office: +1 704 654 4900  
Toll Free: +1 800 446 4752  
Fax: +1 704 654 4917  
Order Tel: +1 704 654 4900  
Order Fax: +1 434 296 8217  
ordermailbox@biotage.com

### EUROPE

Main Office: +46 18 56 5900  
Fax: +46 18 59 1922  
Order Tel: +46 18 56 57 10  
Order Fax: +46 18 56 57 05  
order@biotage.com

### JAPAN

Tel: +81 3 5267 3123  
Fax: +81 3 5267 3121  
jp\_order@biotage.com

To locate a distributor please visit our web site at [www.biotage.com](http://www.biotage.com).