

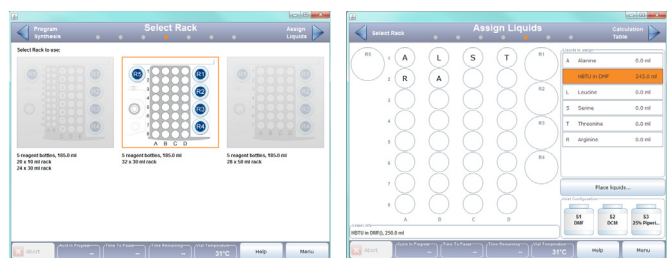
Biotage® Initiator+ Alstra

Automated microwave peptide synthesizer

Microwave irradiation is still the most effective solution for providing a fast, precise and efficient heating method for synthesizing peptides, peptoids, PNA and peptidomimetics with higher purity and yield compared to conventional synthesis methods. The Biotage® Initiator+ Alstra is a fully automated microwave peptide synthesizer with built in flexibility for both small and large scale synthesis.

Simple to program

The system is programmed via the large 10" touch screen with drag and drop feature, using either pre-defined or custom methods. The built-in wizard makes programming a synthesis sequence effortless and the calculation table generated provides the quantities of reagents required.



Rack selection and liquid assignment is displayed and easily performed on the touch screen.

Flexible and accurate

The flexible reagent setup with modular amino acid racks and reagent bottles enables both small and large scale synthesis. Reagents for capping and multiple coupling can also be used during a synthesis. The accurate dispensing of all reagents is achieved using digital syringe pumps and the dual needle design reduces the possibility of cross contamination.

Reduce costs

Reduce your reagent and solvent consumption using the robot liquid handler with digital syringe pumps. This also minimizes consumption and waste of expensive building blocks. Save even more by benefiting from the ability to perform synthesis on a small scale from as low as 5 µmol.

Synthesize simple and difficult sequences

Use microwave irradiation and standard reagents to synthesize difficult sequences that are problematic or even impossible to synthesize using conventional methods, or just make simple peptides more efficiently.

Complete control

Fully automate all cycles or use semi-automated operations where the Fmoc deprotection and washing steps are automated and then manually add expensive building blocks. This gives you complete control over all reaction steps. Easily pause and re-start a synthesis to remove samples for monitoring and analysis of intermediate reaction steps.

Oscillating mixing

Oscillating mixing within the microwave cavity ensures homogeneous heat distribution and allows for larger scale capability up to 2 mmol.

Advantages

- Microwave assisted peptide synthesis
- Fully automated or semi-automated operation
- Disposable reactor vials and amino acid vessels
- Synthesis on 5 µmol–2 mmol scale
- Large touch screen with drag and drop feature
- User friendly and intuitive software
- Flexible reagent setup with modular racks
- Pre-defined or custom methods
- Oscillating mixing for efficient coupling
- Precise digital syringe pumps
- Easily pause and re-start synthesis
- Less valves for less downtime
- Inert gas option for microwave cavity and reagents
- Compact footprint

Technical Specification

Heating Process

Temperature range	40–100 °C
Temperature increase	Typically 2–5 °C/s
Pressure range	Run at atmospheric pressure
Power range	0–120 W at 2.45 GHz
Reactor vial sizes	5, 10 and 30 mL
Agitation	Oscillating mixing unit
Vial volume range	5 mL (0.6–3.5 mL) 10 mL (3.5–10 mL) 30 mL (4.5–20 mL)
Inert gas (microwave cavity)	Approx. 2 L/min (0.07 cubic feet/min); 0.5 bar (0.05 MPa; 7.25 PSI)
Inert gas (manifold option)	Approx. 4 L/min (0.14 cubic feet/min); 0.5 bar (0.05 MPa; 7.25 PSI)

Liquid Handling

Syringe Pump	3 x digital syringe pumps, with 10 mL sample loop
Flow rate	1–50 mL/min
Reagent bottles	5 x 185 mL GL45 glass bottles
Solvent bottles	1 x 5 L, 1 x 2 L, and 1 x 1 L, GL45 brown glass bottles
Amino acid rack	32 x 30 mL amino acid rack (standard)
Waste Bottle	10 L

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

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)
Max. power consumed	1100 VA
Weight	42 kg (92.6 lbs)
Dimensions (WxDxH)	640 x 430 x 640 mm (25.2" x 16.9" x 25.2")
Vacuum pump	Minimum partial pressure: 100 mbar Flow rate: 11 L/min
Certifications	CE, CAN/CSA certified



Ordering information

Part #	Description
356017	Initiator+ Alstra Microwave Peptide Synthesizer EU
356018	Initiator+ Alstra Microwave Peptide Synthesizer US/JP

Optional Accessories and Consumables

356208	Inert gas manifold
356288	5 mL Reactor vial with PTFE frit (50/pk)
356289	10 mL Reactor vial with PTFE frit (50/pk)
356290	30 mL Reactor vial with PTFE frit (50/pk)
356291	5 mL Reactor vial extension (5/pk)
356221	10 mL Reactor vial extension (5/pk)
356222	30 mL Reactor vial extension (5/pk)
356239	10 mL Amino acid tubes (100/pk)
356240	30 mL Amino acid tubes (100/pk)
356241	50 mL Amino acid tubes (100/pk)
356162	20 x 10 mL Amino acid rack
356167	24 x 30 mL Amino acid rack
356193	32 x 30 mL Amino acid rack
356198	28 x 50 mL Amino acid rack
356163	20 x 10 mL Rack cover plate
356168	24 x 30 mL Rack cover plate
356194	32 x 30 mL Rack cover plate
356199	28 x 50 mL Rack cover plate
356158	R1-4 reagent bottle cover plate
356203	R5 reagent bottle cover plate
356166	20 x 10 mL Foil septa (5/pk)
356192	24 x 30 mL Foil septa (5/pk)
356197	32 x 30 mL Foil septa (5/pk)
356202	28 x 50 mL Foil septa (5/pk)
356161	R1-4 reagent bottle foil septa (5/pk)
356206	R5 reagent bottle foil septa (5/pk)
356252	5 mL/10 mL Reactor vial caps (50/pk)
356253	30 mL Reactor vial caps (50/pk)
356292	Reactor vial plugs (50/pk)
356254	185 mL Reagent bottle, glass
356330	Vacuum pump ME1C, 100-230 VAC 50-60 Hz

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