Evaporation

You can run high-temperature reactions without worrying about solvent removal. Biotage® V-10 Touch rapidly evaporates high boiling-point solvents like DMF, DMSO and NMP.

You can set up a continuous processing of purified fractions automatically by combining Biotage® V-10 Touch with a Gilson liquid handler.

Biotage® V-10 Touch

Peptide purification can generate a large number of fractions that require concentrating and pooling prior to freeze drying. The powerful Biotage® V-10 Touch solvent evaporation system rapidly dries samples dissolved in both aqueous and organic solvents. It easily evaporates fractions from purification or high boiling-point solvents from syntheses such as NMP or storage solvents such as DMSO.

The built in optimized methods have been designed to protect the sample against overheating or bumping while still maintaining maximum evaporation speed.

How Does V10-Touch Help Peptide Chemists?

- Removal of cleavage cocktails, either completely or reducing the volume before ether precipitation.
- Concentration and pooling of flash or HPLC fractions prior to freeze drying.
- Removal of high boiling solvents such as DMF, DMSO that are used in synthesis reactions or as storage solvents.
- Can be used post synthesis or post purification.

Typical Solvent Evaporation Times Using Default Settings (Including Final Dry)

Solvent	Volume (mL)	Method	Time (min)
NMP	12	Very High Boil	18
DMF	12	Very High Boil	7
DMSO	12	Very High Boil	15
Water	12	Aqueous	16
50% Acetonitrile in Water	12	HPLC Fractions	15
20% Piperidine in DMF	8	Mixed Vol & HPB	7
TFA	5	Volatile	5

Learn More

Biotage® V-10 Touch Evaporation System
Product Video

Biotage® V-10 Touch
Product Folder (PPS415)

Using Peptide Synthesizers for Discovery of Non-standard Peptides
Customer case (PPS406)

Technical Specifications

Biotage® Initiator+ Alstra™

Heating Process

Temperature Range	40–100 ºC
Temperature Increase	Typically 2–5 ºC/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
Reaction Volumes	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	6–50 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
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

Operating Temperature	18–32 °C
Storage and Transportation Temperature	-25°C to 60°C (-13°F to 140°F)
Humidity	20–95% at room temperature
Power Requirements	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 (W X D X H)	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 (0.4 cubic feet/min)

Certifications

CE, CAN/CSA certified

Syro I

System Specification

Automation	Single robotic arm
Liquid Handling	Two 5 mL digital syringe pumps
Agitation	Vortex mixer for reactor block
Reactor Block (standard)	One U-type reactor block for 2, 5 and 10 mL reactor vials. Choice of either 24 or 48 positions
Vacuum Pump	ME 2C
Amino Acid Rack	40 x 50 mL
Reagent Bottle Rack	2 x 500 mL, 3 x 200 mL
Waste Bottle	1 x 10 liter Nalgene bottle
Equipment	Includes desktop PC, flat panel monitor, printer, and Syro XP software
Dimensions (W X D X H)	56 cm x 70 cm x 91 cm
Weight	60 kg

Power Requirements

Robot (max. 250 W)	EU:230 V~, 50 Hz (1.5 A) USA: 120 V~, 60 Hz (2.5 A) Japan: 100 V~, 50/60 Hz (3.0 A)
Vacuum Pump	EU: 230 V~, 50/60 Hz (1.4 A) USA: 120 V~, 60 Hz (3 A) Japan: 100–115 V~, 50/60 Hz (3.8 A)

Syro II

System Specification

Automation	Dual robotic arm with a three tip pipetting washcomb
Liquid Handling	Four digital syringe pumps - 1 x 5 mL digital syringe pump for amino acid addition, 3 x 10 mL digital syringe pumps for solvent wash and reagent addition.
Agitation	Vortex mixer for two reactor blocks
Reactor Block (standard)	Two U-type reactor blocks for 2, 5 and 10 mL reactor vials. Choice of either 24 or 48 positions
Vacuum Pump	ME 4C
Amino Acid Rack	40 x 50 mL
Reagent Bottle Rack	3 x 500 mL, 4 x 200 mL
Waste Bottle	1 x 20 liter Nalgene bottle
Equipment	Includes desktop PC, flat panel monitor, printer, and Syro XP software
Dimensions (W X D X H)	82 cm x 70 cm x 91 cm
Weight	85 kg

Power Requirements

Robot (max. 250 W)	EU:230 V~, 50 Hz (1.5 A) USA: 120 V~, 60 Hz (2.5 A) Japan: 100 V~, 50/60 Hz (3.0 A)
Vacuum Pump	EU: 230 V~, 50/60 Hz (1.4 A) USA: 120 V~, 60 Hz (3 A) Japan: 100–115 V~, 50/60 Hz (3.8 A)

Biotage® Initiator+ SP Wave

Heating Process

Temperature Range	Peptide synthesis: 40°C to 100°C Organic synthesis: 40°C to 300°C Note: Biotage® Microwave Reaction Vials 10–20 mL for organic synthesis may not be used at temperatures above 250°C.
Temperature Increase	Typically 2°C to 5°C per second depending on solvent and power applied.
Pressure Range	Peptide synthesis: Run at atmospheric pressure Organic synthesis: 0 to 30 bar (3 MPa; 435 PSI) Note: Biotage Microwave Reaction Vials 10–20 mL may not be used at pressures above 20 bar.
Power Range	Peptide synthesis: 0 to 120 W from magnetron at 2.45 GHz Organic synthesis: 0 to 400 W from magnetron at 2.45 GHz
Reactor Vial Sizes	Peptide synthesis: 2 mL, 5 mL and 10 mL Organic synthesis: 0.2–0.5 mL, 0.5–2.0 mL, 2.0–5.0 mL and 10–20 mL
Agitation	Peptide synthesis: Vortex unit (500 to 1300 rpm) Organic synthesis: Magnetic stirrer (300 to 900 rpm)
Reaction Volumes	Peptide synthesis: 2 mL reactor vial: 0.8–1.1 mL 5 mL reactor vial: 1.6–3.2 mL 10 mL reactor vial: 3.2–6.4 mL Organic synthesis: 0.2 to 20 mL in microwave reaction vials
Inert Gas (optional)	Approximately 2 L/min (0.07 cubic feet/min), 0.5 bar (0.05 MPa; 7.25 PSI)

Liquid Handling

Syringe Pump	Digital single syringe pump, 11 mL with sample loop
Flow Rate	2–50 mL/min
Reagent Bottle Rack	3 x 100 mL
System Solvent	1 x 2000 mL

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

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	33 kg (72.7 lbs.)
Dimensions (W X D X H)	400 mm x 500 mm x 685 mm (15.7” x 19.7” x 27.0”)
Vacuum Source	Minimum partial pressure: 100 mbar
Flow Rate	11 L/min (0.4 cubic feet/min)

Certifications

CE, CSA certified

Isolera

System Specification	
Flow Rate	1–200 mL/min
Pressure Limit	145 psi (10 bar)
No. of Column Channels	1
UV Detection	Choice of variable wavelength (200–400 nm), fixed (254 nm), or UV-VIS (200–800 nm) detectors
Collection Vessels	Test tubes (13 mm, 16 mm, 18 mm, and 25 mm) and bottles (120 mL, 240 mL, and 480 mL)
System Control & Data Management	On-board computer with 10.4” capacitive touch screen interface
Dimensions (W X H X D)	355 mm (14”) x 596 mm (23.5”) x 497 mm (19.6”). Add 178 mm (7”) with EXP
Weight	30–35 kg (66–77 lbs)
Power Requirements	100–240 VAC, 50/60 Hz, 4.0 A
Certifications	CE, cTÜVus

Biotage® Selekt

System Specification	
Flow Rate	1–300 mL/min
Pressure Limit	435 psi (30 bar)
No. of Column Channels	2
UV Detection	Choice of variable wavelength (200–400 nm) or UV-VIS (198–800 nm) detectors
Collection Vessels	Test tubes (13 mm, 16 mm, 18 mm, and 25 mm) and bottles (120 mL, 240 mL, and 480 mL)
System Control & Data Management	On-board computer with 15.0” (1024 x 768 px) solvent stable TFT LCD touch screen
Dimensions (W X H X D)	335/550* mm (13.2”/21.7”*) x 545 mm (21.5”) x 393 mm (15.5”). *With extended collection bed
Weight	23–25 kg (50-54 lbs), depending on system configuration
Power Requirements	100–127, 220–240 VAC, 50/60 Hz. Connect only to a grounded outlet
Certifications	CE and FCC marked. CB and NRTL certified

Biotage® V-10

Solvent Compatibility	Boiling points from 30 °C to 160 °C (up to 205 °C with an external vacuum pump). The system is not suitable for solutions containing HCl at any concentration.
Heating	20 °C to 70 °C
Rotational Speed	3000 to 8000 rpm
Condenser	Refrigerated condenser temperature: -25 °C. Automated and manual draining; and manual defrost.
Vacuum	Pressure control method: Variable speed and level. Internal vacuum Pump: 2 mbar. Optionally an external vacuum pump can be connected using a KF-16 vacuum flange.
Vial Compatibility	30 mL scintillation vial 20 mL scintillation vial 16 mL vial 8 mL vial 4 mL
Solvent Reclamation	Up to 98% of solvent vapors under typical conditions
Exhaust	Double trapping
Electrical Supply	220–240 V~, 50 and 60 Hz, 10 A
Max. Power Consumed	2100 VA
Dimensions (WxDxH)	40 cm x 48 cm x 53 cm 15.7” x 18.9” x 20.9”
Weight	50 kg/110 lbs
Part Numbers	V10-2XX V-10 Touch System V10-2SC V-10 Touch System with Solvent Manager and Automation
Accessories	411181 Carousel Vial Holder 30/20 mL vials 411816 Gilson Liquid Handler GX271 - V-10