

Organic Chemistry


Products from Start to Finish



From Start to Finish

Organic chemists synthesizing new molecules follow a general workflow. Biotage has developed tools for every step of the process, with the entire workflow in mind. This dedicated suite of products vastly expands the range of options in order to truly accelerate discoveries of new molecules for future innovations.

[Learn More on www.biotage.com](#)

 **Support Documents**
Find it easily using the part number in brackets (e.g. PPS418)

 **Video Tutorials and Webinars**



www.biotage.com contains thousands of support documents and videos for every product. Log in and download – for free.

CONTENTS

- 1** Supporting the Whole Organic Workflow
- 2** Synthesis – Reaction
- 4** Work Up
- 6** Purification
- 8** Evaporation



Supporting the Whole Organic Workflow

Synthesis Design

Forget traditional limitations in reaction conditions – with Biotage products these barriers do not apply to your successful experiment design.

Synthesis – Reaction (p. 2–3)

Safe and rapid heating with microwaves accelerates the synthesis, with much shorter reaction times than conventional heating.

The reaction mixture is often evaporated directly following synthesis

Work Up (p. 4–5)

Prepare the crude mixture for purification. This can involve filtration, catalyst removal, phase separation or various catch-and-release techniques.

Purification (p. 6–7)

Intelligent flash purification systems and ultra high-performing cartridges will give you pure fractions every time.

Evaporation (p. 8)

Remove DMF, water and DMSO in minutes. The versatility in this final step is what truly allows for creative workflow design.



Biotage® Initiator+
Microwave Synthesizer

Reaction Mixture

Biotage® Work-up
Products

Crude Product

Purify extracts from
natural sources

Isolera® Flash
Purification Systems

Pure Product

Biotage® V-10 Touch
Evaporator

End Product



Synthesis – Reaction

Pioneers in microwave heating technology, Biotage carries this legacy into the latest instruments, automation robots and microwave vials for safe and reliable high speed organic reactions.








Biotage® Initiator+

Fourth Generation Microwave Synthesizer

The Biotage Initiator+ represents a new generation of synthesizer instruments for organic, medicinal, materials, nano and polymer chemistry professionals. Controlled temperatures up to 300 °C and pressures up to 30 bar open new possibilities to performing difficult reactions – even with low boiling point solvents. The system automatically senses and performs reactions at their highest possible temperatures.

Learn More

-  **Microwave Synthesis - Fourth Generation Systems**
Systems Brochure (PPS299)
-  **Microwave Reaction Tutorial - Reaction Examples for the Teaching Laboratory**
User Manual (UI307)
-  **Biotage® Initiator+ Advanced Microwave Organic Synthesis**
Webinar Video
-  **Setting Up Biotage® Initiator+**
Video Tutorial
-  **Biotage® Initiator+ Microwave Organic Synthesizer - Advanced Settings**
Video Tutorial

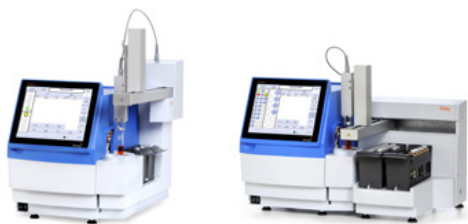







Synthesis Automation

Queue Up and Walk Away

Connecting a Robot Eight or Robot Sixty transforms Biotage® Initiator+ into a compact automation platform which supports multi-user environments, production of focused libraries, and scale-out, and use of both large and small vials in any order without manual intervention.



Learn More

-  **Microwave Synthesis - Fourth Generation Systems**
Systems Brochure (PPS299)
-  **Microwave Synthesis Automation**
Robot 8/Robot 60 Product Note (SS-INT.R 0611)
-  **Automated Microwave Synthesis on Biotage® Initiator+**
Video Tutorial


Microwave Vials

Four Vial Sizes

Initiator+ supports all Biotage vials from 0.2 to 20 mL, delivering greater flexibility and direct scale-up from milligrams to grams. The four different vial sizes can be used in any order or combination without system modifications.



Learn More

-  **Microwave Synthesis Vials - Migrate From mg to g Without Reoptimization**
Product Note (TN-VIAL.0811)



Work Up

We all want our reactions to go perfectly the first time. But very often A+B leads to C+D, or more. In these cases, Biotage can help with a wide array of modular clean up techniques for your application. From automatic liquid-liquid extraction to filtration, from catch & release to targeted metal removal, these tools greatly simplify and amplify productivity.



Drying Organic Samples

ISOLUTE® Sodium Sulfate Drying Cartridges

Pre-packed sodium sulfate cartridges. Simply plug in onto a luer tip and pass through. Immediate results and ultra convenient.

ISOLUTE® HM-N

Rapid aqueous work-up and removal of water soluble impurities from reaction mixtures.

Filtration, Stopcocks, Adaptors and Processing Stations

Cost effective, ready to use, easy to parallelize, infinitely flexible, from simple filtration to multistage stacked reaction vessels. Cover, cap, adapt and build.

ISOLUTE® Filtration Cartridges

The convenient cost-effective alternative to traditional filtering.

Celite® Cartridges

“Tar” and catalyst removal during first-stage reaction work-up.

ISOLUTE® Empty Reservoirs

Extend the cartridge volume.

Learn More

Work-up Products
Product Brochure (PPS352)

Industrial Products Portfolio
Product Brochure (PPS385)

Catch and Release

During catch & release the media bed “catches” the compound of interest for subsequent elution by an appropriate solvent. Biotage has a range of cartridges targeting acidic, basic and neutral compounds.

ISOLUTE® SCX-2

Catch & release and scavenging of basic compounds.

MP-TsOH

Catch & release and scavenging of basic compounds.

ISOLUTE® PE-AX

Catch & release and scavenging of acidic compounds.

ISOLUTE® PE-AX/SCX-2

Simultaneous scavenging of basic and acidic compounds.

ISOLUTE® 103

Concentration of prep-1c fractions using catch & release.



*Celite is a registered trademark of the Johns-Mansville Corporation.



Metal Scavenging

The ultimate product for metal removal. Targeting transitional metals, Biotage metal scavengers are the most powerful tools for quickly and efficiently removing Pd after Suzuki-Miyaura reactions. Kinetically fast and 100% reliable, whether small scale screening or multi-kg implementation, these materials have been designed with regulatory compliance and GMP in mind.


Metal Scavenging Tool Kit

All-in-one kits for metal scavenging.


Biotage® Argoscoop™

Resin dispenser – useful and coveted lab accessory.

[Learn More](#)

 **Metal Scavenging Tool Kit**
Product note (PPS377)

 **Metal Scavenger User Guide**
User guide (UI317)

 **Biotage Metal Scavengers**
Video Tutorial



Phase Separation

Liquid-liquid extraction, but without a separating funnel. No glassware to wash and dry, can also break emulsions. Various volume capabilities, ready to use, easy to parallelize, and 100% effective and automatic. No need to visually stop flow, automatic stop when one phase has passed through. Solutions for when the organic phase is both more dense or less dense than the aqueous phase.


ISOLUTE® Phase Separators


More efficient than traditional glass separating funnels.

Biotage® Universal Phase Separator

Float or sink – separates any phase from water.

[Learn More](#)

 **Biotage® Universal Phase Separator**
Product Note (PPS306)

 **Biotage® Universal Phase Separator**
Video Tutorial



Purification

Biotage first pioneered pre-packed cartridges for flash chromatography in the 70s. Our unrivalled experience in the field enable us to keep on developing leading systems for purification.



Isolera™ One



Isolera™ Prime



Isolera™ Four



Isolera™ LS



Isolera™ Spektra

Isolera™ Flash Chromatography Systems

Isolera™ Prime

Entry level chromatography system with basic features.

Isolera™ One

One-cartridge chromatography system ideal for one or two users.

Isolera™ Four

Four-cartridge chromatography system with multi-user capacity.

Isolera™ LS

Fully automated chromatography system for purification of up to 500 grams with built in sample load pump.

Learn More

Isolera™ Tutorial
Video Tutorial

Biotage Flash Purification Systems - Pure Compounds in a Flash
Product Brochure (PPS319)

Isolera™ Flash Chromatography Software

Isolera™ Spektra

Advanced software upgrade for Isolera™ One, Four and LS. Features include TLC-to-Step gradient calculator, simultaneous UV-detection at all wavelengths, baseline correction and 3D chromatogram.

Isolera™ Assist

Isolera™ systems software wizard. Assist is an intelligent guide for selecting optimal cartridges based on crude sample mass and TLC data. It ensures you achieve the best results, regardless of your experience level.

ACI™ – Accelerated Chromatographic Isolation

ACI™ is a new advanced way of converting simple flash purification into a faster and more economical way to isolate pure compounds.

ACI™ Accelerated Chromatographic Isolation



Isolera™ Dalton

Mass-Driven Flash Purification

Integrates mass identification with flash purification.
Separates compounds by mass on the fly.

Learn More

 **Isolera™ Dalton Mass Directed Flash Chromatography**
Product Brochure (PPS321)

 **Isolera™ Dalton - Flash Chromatography with Integrated Mass Identification**
Product Video





Flash Cartridges

Eight Stationary Phases, Four Cartridge Formats, Twenty Five Sizes

Flash cartridges for normal and reversed phase chromatography at different resolutions and performances.
Cartridge sizes range from 5 g to 40 kg.

Learn More

 **Flash Purification Consumables – A Guide to Cartridges & Method Development**
Product Brochure (PPS327)

 **How to Load Flash Chromatography Cartridges**
Video Tutorial



Biotage® ELSD-A120

Evaporative Light-scattering Detector

A universal detector designed for use with Isolera™ systems when purifying organic compounds undetectable in UV or by visible light.





Evaporation

Getting rid of solvent has long been a bottleneck in organic workflow. With the powerful Biotage® V-10 Touch evaporator, those days are gone. This system can evaporate DMSO and NMP with ease, meaning chemists are no longer limited to only volatile solvents in reaction design.



Biotage® V-10 Touch

Walk-up, Walk-away Evaporation System

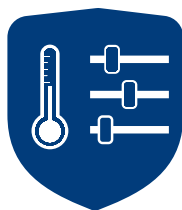
Biotage® V-10 solvent evaporation system rapidly dries samples dissolved in both aqueous and organic solvents up to 20 times faster than traditional rotary or centrifugal evaporators. A patented combination of drying techniques, including high-speed vial rotation, uniform IR controlled heating, and

vacuum drying, allows for both rapid evaporation and low temperature evaporation of high boiling solvents. Pre-defined evaporation methods have been optimized to protect the sample against overheating or bumping while still maintaining maximum evaporation speed.



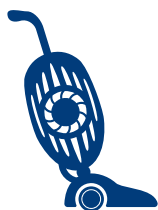
Speed without Bumps

With rotation speeds up to 8,000 rpm you can perform quick evaporation without the risk of bumping or contamination.



Hot Precision

Precise contact-free heating with live IR control monitors your evaporation and keeps your sample safe at all times.



Vacuum Powered Success

The 2 mbar built-in vacuum pump accelerates the evaporation process. By plugging in the external accessory pump, you can even evaporate DMSO and NMP in minutes.



Learn More

Biotage® V-10 Touch Evaporation System
Product Video

Biotage® V-10 Touch
Product Folder (PPS415)



Your Complete Partner for Effective Chemistry

Biotage is a worldwide supplier of instruments and accessories designed to facilitate the work of laboratory and process chemists. With our deep knowledge of the industry, academic contacts and in-house R&D teams, we can deliver the best solutions to your challenges. We take great pride in our flexibility and ability to meet our customer's individual needs. With strong foundations in both analytical, organic and process chemistry, we can offer the widest range of solutions available on the market.

EUROPE

Main Office: +46 18 565900
Toll Free: +800 18 565710
Fax: +46 18 591922
Order Tel: +46 18 565710
Order Fax: +46 18 565705
order@biotage.com
Support Tel: +46 18 56 59 11
Support Fax: + 46 18 56 57 11
eu-1-pointsupport@biotage.com

NORTH & LATIN 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
Support Tel: +1 800 446 4752
Outside US: +1 704 654 4900
us-1-pointsupport@biotage.com

JAPAN

Tel: +81 3 5627 3123
Fax: +81 3 5627 3121
jp_order@biotage.com
jp-1-pointsupport@biotage.com

CHINA

Tel: +86 21 2898 6655
Fax: +86 21 2898 6153
cn_order@biotage.com
cn-1-pointsupport@biotage.com

To locate a distributor,
please visit our website
www.biotage.com

Part Number: PPS418

© 2016 Biotage. All rights reserved. No material may be reproduced or published without the written permission of Biotage. Information in this document is subject to change without notice and does not represent any commitment from Biotage. E&OE. A list of all trademarks owned by Biotage AB is available at www.biotage.com/legal. Other product and company names mentioned herein may be trademarks or registered trademarks and/or service marks of their respective owners, and are used only for explanation and to the owners' benefit, without intent to infringe.

