

# Biotage<sup>®</sup> Lysera

Bead Mill Homogenizer



# Biotage® Lysera

## Bead Mill Homogenizer

Biotage® Lysera is the solution to extracting analytes from difficult matrices. The design offers a quick and effective approach without jeopardizing sample integrity.

The system is specifically designed for the grinding, lysing and homogenization of samples prior to any form of sample extraction. Using sample tubes pre-filled with a variety of beads, the Lysera vigorously and uniformly shakes the tubes providing an efficient, consistent, high-yield and quality homogenization usually in less than 40 seconds. Samples are enclosed in individual vessels to prevent cross contamination and can accommodate dry or wet homogenization of samples from milligram to gram quantities.

Available with a wide range of accessories the Lysera enables processing of samples in volumes ranging from 0.5 mL to 50 mL. The optional Cryo Cooling Unit is designed to prevent the increase of sample temperature during the homogenization process.

### Features

- » Optimized tube motion with speeds up to 8 m/s
- » Simultaneously homogenize up to 24 samples per cycle
- » Convenient front-loading tube holder position for ease of use and optimal bead/sample interactions
- » Interlocking Safety Lid
- » Broad speed range for any type of sample processing
- » High reproducibility: number of cycles, time, speed, dwell/pause
- » No Cool-down required between runs: process hundreds of samples per day
- » 99 programmable memory settings
- » Disposable tubes ensure no threat of cross-contamination or sample degradation



### Specifications

<b>Processing Range</b>	25 µL to 50 mL
<b>Electrical Supply</b>	100–230 VAC 50–60 Hz
<b>Fuses</b>	6 A
<b>Dimensions</b>	(W x D x H): 394 x 432 x 330 mm (15.5" x 17" x 13") The height with the lid open is 610 mm (24")
<b>Weight</b>	29 kg (64 lbs.)
<b>Certifications</b>	CE marked and CSA, TUV compliant
<b>Run Time</b>	1 second–9:59 minutes
<b>Number of Programs</b>	99 Saved Programs
<b>Number of Cycles</b>	1–10
<b>Performance Range</b>	0.8–8 m/s by 0.15 m/s increments

# Tube Selection Guide

## By Sample Type

	Lyse/Disrupt		Homogenize				Grind	
Size	0.1 mm Glass	0.5 mm Glass	1.4 mm Ceramic	2.8 mm Ceramic	0.15 mm Garnet	0.7 mm Garnet	2.4 mm Metal	0.25 mm Carbide
Part Number	19-621	19-622	19-627	19-628	19-623	19-624	19-620	19-625
<b>Microbial</b>								
Bacteria	✓	✓			✓			✓
Yeast		✓	✓		✓			✓
Fungi	✓	✓			✓			✓
Spores	✓	✓			✓			✓
<b>Animal</b>								
Skin			✓	✓		✓		
Nerves			✓	✓				
Artery				✓		✓		
Intestine				✓		✓		
Tumors				✓		✓		
Muscle			✓	✓		✓	✓	
Brain			✓	✓		✓		
Liver			✓	✓		✓		
Kidney			✓	✓		✓		
Lung			✓	✓		✓		
Heart			✓	✓		✓		
Bone				✓			✓	
Hair				✓		✓	✓	
Cartilage				✓			✓	
Cornea			✓	✓				
<b>Fish/Insects</b>								
Insects			✓	✓				
Zebrafish		✓	✓			✓		
<b>Plant</b>								
Leaves				✓			✓	
Seeds				✓			✓	
Rice				✓			✓	
Wheat				✓			✓	
Stems				✓			✓	
Roots				✓			✓	
Moss			✓	✓			✓	
<b>Soil</b>								
Soil			✓	✓		✓	✓	✓
Sediment			✓			✓	✓	✓

## By Sample Volume

Tube Size	Volume Range of Sample to be Extracted						
	20 µL	100 µL	1 mL	5 mL	15 mL	30 mL	50 mL
0.5 mL	20 µL–300 µL						
1.2 mL Stripwell	20 µL–800 µL						
1.5 mL	20 µL–1.5 mL						
2 mL		100 µL–1.8 mL					
7 mL			1 mL–5 mL				
15 mL				5 mL–15 mL			
30 mL				5 mL–30 mL			
50 mL				5 mL–50 mL			

## Beads and Tubes

Biotope offers a selection of beads and tubes for ultimate versatility.

A variety of bead media are available for different sample types. Biotope tube sizes fit a range of sample volumes. With the Lysera system's vigorous and uniform shaking, all samples are consistently homogenized.



# Accessories

## Biotage® Lysera Bead/Tube Kits

The Biotage Bead Kits consist of durable tubes and beads, designed to work together to ensure maximum performance and maintain sample integrity.

- » Tubes are fully solvent and buffer compatible
- » Each pack contains 50 tubes pre-filled with bead matrix



**Part Number 19-627**  
**2 mL Tubes filled with 1.4 mm Ceramic Beads**

This matrix will provide a quick and reliable homogenization on small and soft animal, plant or human tissues sizes. It is optimal for brain, liver, skin, leaves, gonad etc. For sample volumes under 300 mg and 1 mL.



**Part Number 19-625**  
**2 mL Tubes with 0.5 mL Insert filled with 0.25 mm Carbide Beads**

This matrix will provide a quick and reliable lysis when processing microbial RNA and soil RNA.



**Part Number 19-628**  
**2 mL Tubes filled with 2.8 mm Ceramic Beads**

This matrix will provide a quick and reliable homogenization of hard animal, plant or human tissues. It is optimal for skin, muscle, lung, seeds, rice, leaves, wheat etc. Volumes higher than 300 mg and 1 mL.



**Part Number 19-620**  
**2 mL Tubes filled with 2.4 mm Metal Beads**

(innoxidable). This matrix will provide a quick and reliable homogenization of any hard and dry tissue type. It is optimal for hair, teeth, bones, seeds, corn, nail etc.



**Part Number 19-622**  
**2 mL Tubes filled with 0.5 mm Glass Beads**

Tough microorganisms and gram+ bacteria. It is optimal for spores, yeast, mold, algae, listeria, etc.



**Part Number 19-623**  
**2 mL Tubes with 0.5 mL Insert filled with 0.15 mm Garnet Beads**

Tough microorganisms and gram+ bacteria. It is optimal for spores, yeast, mold, algae, listeria, etc.



**Part Number 19-621**  
**2 mL Tubes filled with 0.1 mm Glass/Silica Beads**

Soft microorganisms and gram- bacteria. It is optimal for E-coli, mycobacteria, salmonella, etc.



**Part Number 19-624**  
**2 mL Tubes filled with 0.7 mm Garnet Beads**

This matrix mix can be described as the Universal bead mix containing particles with sharp edges. This matrix will provide a quick and reliable homogenization of tough samples (skin, muscle etc.) and soil.



**Part Number 19-626**  
**2 mL Tubes with 0.5 mL Insert filled with 1.4 mm Ceramic Beads**

Recommended for soft tissue samples, biopsies, tissue punches, arteries, nerves and veins

## Bead Mill Accessories



### 96 Strip Well Tube Carriage Kit (Part Number 19-010-330)

- » 96 x 1.2 mL strip well tubes
- » Includes Finger Plate and tube carriage



### 1.5 mL Tube Carriage Kit (Part Number 19-010-310S)

- » 24 x 1.5 mL microtubes
- » Includes Lysera Finger Plate and tube carriage



### 2 mL Tube Carriage Kit (Part Number 19-010-310)

- » 24 x 2 mL or 24 x 0.5 mL skirted tubes
- » Includes Lysera Finger Plate and tube carriage



### 7 mL Tube Carriage Kit (Part Number 19-345-007)

- » 12 x 7 mL tubes
- » Includes lock ring and tube carriage



### 15 mL Tube Carriage Kit (Part Number 19-345-015)

- » 3 x 15 mL tubes
- » Patent pending snap-in tube carriage for 15 mL samples; kit includes lock ring and tube carriage



### 30 mL Tube Carriage Kit (Part Number 19-345-035)

- » 6 x 30 mL tubes
- » Patent pending snap-in tube carriage for 30 mL samples; kit includes lock ring and tube carriage



### 50 mL Tube Carriage Kit (Part Number 19-345-050)

- » 3 x 50 mL tubes
- » Patent pending snap-in tube carriage for 50 mL samples; kit includes lock ring and tube carriage



### Cryo Unit (Part Number 19-8005B)

- » Cooling system to protect heat sensitive samples during homogenization

# Simplified Sample Prep Workflow

Biotage is dedicated to developing sample preparation products that solve the daily challenges faced in toxicology laboratories worldwide, whether it's difficult matrices, broad analyte panels or increasing throughput requirements. Our focus is providing the complete toolbox for analytical challenges. We understand your need to reduce matrix effects in LC-MS/MS without compromising speed, simplicity or analyte recovery.

## Biotage® Extrahera™

Automation system for sample preparation, supporting individual column and 96-well plate extractions. Compatible with all industry standard extraction techniques including supported liquid extraction. Extrahera handles biological samples including blood with ease. The perfect partner for your toxicology laboratory.



## Biotage® PRESSURE+

Biotage® PRESSURE+ manifolds deliver positive pressure, parallel processing for 96 well plates, 1 mL 3 mL and 6 mL column formats. The systems utilize a consistent, uniform flow of positive pressure to move both low and high viscosity liquids through SPE plates and columns.



## Biotage® VacMaster™

Sample processing manifolds for up to 10 (VacMaster-10) or 20 (VacMaster-20) SPE or filtration columns to be processed simultaneously under vacuum. Unused ports are sealed when not required. Vacuum controls provide excellent sample flow control, leading to reproducible, reliable extraction conditions.



## TurboVap® II

Built on the solid foundations of reliability and performance that made it the market leader. Provides parallel evaporation of up to 6 samples in 50 or 200 mL glassware with end point detection to minimize volatile analyte losses.



## Ordering Information

Part Number	Description	Qty.	Part Number	Description	Qty.
<b>Bead Mill</b>			<b>19-626</b>	Soft Tissue Homogenizing Mix (2 mL Tubes)	50
<b>19-060</b>	Biotage® Lysera Includes drive unit, user manual; 1 year warranty	1	<b>19-627</b>	Soft Tissue Homogenizing Mix (2 mL Tubes) Nuclease Free	50
<b>Accessories</b>			<b>19-628</b>	Hard Tissue Homogenizing Mix (2 mL Reinforced Tubes) Nuclease Free	50
<b>19-010-330</b>	96 Strip Well Tube Carriage Kit » 96 x 1.2 mL strip well tubes » Includes finger plate and tube carriage	1	<b>7 mL Pre-Filled Bead Mill Tubes</b>		
<b>19-010-310S</b>	1.5 mL Tube Carriage Kit » 24 x 1.5 mL microtubes » Includes Lysera finger plate and tube carriage	1	<b>19-670</b>	Hard Tissue Grinding Mix (7 mL Tubes)	50
<b>19-010-310</b>	2 mL Tube Carriage Kit » 24 x 2 mL or 24 x 0.5 mL skirted tubes » Includes Lysera finger plate and tube carriage	1	<b>19-677</b>	Soft Tissue Homogenizing Mix (7 mL Tubes)	50
<b>19-010-007</b>	7 mL Tube Carriage Kit » 12 x 7 mL tubes » Includes lock ring and tube carriage	1	<b>19-678</b>	Hard Tissue Homogenizing Mix (7 mL Tubes)	50
<b>19-345-015</b>	15 mL Tube Carriage Kit » 3 x 15 mL tubes » Patent pending snap-in tube carriage for 15 mL samples; kit includes lock ring and tube carriage	1	<b>15 mL Pre-Filled Bead Mill Tubes</b>		
<b>19-345-035</b>	30 mL Tube Carriage Kit » 6 x 30 mL tubes » Patent pending snap-in tube carriage for 30 mL samples; kit includes lock ring and tube carriage	1	<b>19-6158</b>	Hard Tissue Homogenizing Mix (15 mL Tubes)	50
<b>19-345-050</b>	50 mL Tube Carriage Kit » 3 x 50 mL tubes » Patent pending snap-in tube carriage for 50 mL samples; kit includes lock ring and tube carriage	1	<b>30 mL Pre-Filled Bead Mill Tubes</b>		
<b>19-8005B</b>	Cryo Cooling Unit	1	<b>19-6350</b>	Hard Tissue Grinding Mix (30 mL Tubes)	50
<b>1.5 and 2 mL Pre-Filled Bead Mill Tubes</b>			<b>19-6357</b>	Soft Tissue Homogenizing Mix (30 mL Tubes)	50
<b>19-610</b>	Hard Tissue Grinding Mix 1.5 mL	50	<b>19-6358</b>	Hard Tissue Homogenizing Mix (30 mL Tubes)	50
<b>19-617</b>	Soft Tissue Homogenizing Mix 1.5 mL	50	<b>50 mL Pre-Filled Bead Mill Tubes</b>		
<b>19-618</b>	Hard Tissue Homogenizing Mix 1.5 mL	50	<b>19-6508</b>	Hard Tissue Homogenizing Mix (50 mL Tubes)	50
<b>19-620</b>	Hard Tissue Grinding Mix (2 mL Reinforced Tubes) Nuclease Free	50	<b>Bulk Beads and Tubes</b>		
<b>19-621</b>	Micro-Organism Lysing Mix (2 mL Tubes)	50	<b>19-640</b>	Bulk 2.4 mm Metal Beads	500 g
<b>19-622</b>	Tough Micro-Organism Lysing Mix (2 mL Tubes) Nuclease Free	50	<b>19-642</b>	Bulk 0.5 mm Glass Beads	400 g
<b>19-623</b>	Small Volume Micro-Organism Lysing Mix (2 mL Tubes with 0.5 mL insert)	50	<b>19-645</b>	Bulk 1.4 mm Ceramic Beads	325 g
<b>19-624</b>	Hard and Fibrous Tissue Mix (2 mL Tubes)	50	<b>19-646</b>	Bulk 2.8 mm Ceramic Beads	325 g
<b>19-625</b>	Small Volume Soil Homogenizing Mix (2 mL Tubes with 0.5 mL insert)	50	<b>19-696</b>	1.2 mL 96 Strip Well Tubes	10
			<b>19-649</b>	Bulk 2 mL Reinforced Tubes with screw caps	1000
			<b>19-651</b>	Bulk 7 mL Reinforced Tubes with screw caps	1000
			<b>19-6615</b>	Bulk 15 mL Tubes with leak proof screw caps	100
			<b>19-6635</b>	Bulk 30 mL Tubes with leak proof screw caps	100
			<b>19-6650</b>	Bulk 50 mL Tubes with leak proof screw caps	100

# 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 68162810  
Fax: +86 21 68162829  
cn\_order@biotage.com  
cn-1-pointsupport@biotage.com

## KOREA

Tel: +82 31 706 8500  
Fax: +82 31 706 8510  
korea\_info@biotage.com  
kr-1-pointsupport@biotage.com

## INDIA

Tel: +91 22 4005 3712  
india@biotage.com

Distributors in other regions  
are listed on [www.biotage.com](http://www.biotage.com)

## Part Number: PPS617

© 2020 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](http://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.

