

# FastPrep-24™

## Crushing Lysis Efficiency. Nothing Resists FastPrep®.

FastPrep® systems, lysing matrix and kits provide the most usable DNA, RNA and proteins from tough, dirty or tiny samples.

*Fast and easy, everytime.*



Higher Yields. Consistent Quality. Super Fast.

# FastPrep-24™ 5G

Most Advanced Lysis, Homogenization and Grinding System Applicable for Genomics, Proteomics, or Other Chemical Studies and Analysis.



**MOST VERSATILE**  
Often Imitated,  
Never Replicated



QuickPrep Sample Holder included with instrument

The FastPrep-24 5G instrument is a versatile sample disruption device that provides the ultimate in speed and performance for the lysis of biological or inorganic samples.

A completely self-contained system, the FastPrep-24 5G instrument eliminates the risk of cross-contamination and time-consuming clean-up associated with manual lysis methods.

Samples and buffers are simply added to a Lysing Matrix tube containing specialized Lysing Matrix particles. Select your sample type from the Recommended Programs menu, push start, and in 40 seconds or less, your samples are completely lysed. The FastPrep-24 5G also allows for up to 12 custom assays to be manually programmed and saved.

## Specifications

|                     |  |
|---------------------|--|
| Interface           | Touch Screen Interface   |
| Programmable Assays | Up to 12 Manual Assays Saved to Memory   |
| Pre-Defined Assays  | 73 Pre-Defined and Optimized Assay Programs  |
| Time Range          | 1 to 120 seconds in 1 second Increments  |
| Speed Range         | 4 to 10 m/sec in 0.5 m/sec Increments  |
| Cycles              | 1 to 9 Cycles  |
| Pause Time          | 1 to 300 Second Pause Between Cycles in 1 Second Increments (Default: 300 Seconds) |
| Data Export         | Via USB  |
| Acceleration        | < 2 Seconds to Maximum Speed   |
| Deceleration        | < 2 Seconds to Stop  |
| Dimensions          | Height: 490 mm; Base: 472 mm x 385 mm (Elliptic Shape)                             |
| Weight              | 23.6 kg (52 lb)  |
| Power Requirement   | 120 VAC/60 Hz, 500W; 230 VAC/50 Hz, 500 W  |
| Maximum Sound Level | < 70 dB  |

The heartbeat of the 5G is a microprocessor control interfaced to a touch screen display. The large, 7-inch HD monitor allows assay parameters to be set with the touch of a button. Hi-def graphics and intuitive software make programming the 5G fast and simple, while high-tech exterior graphics add to the sleek and sophisticated design of the instrument.

### Product Name

FastPrep-24™ 5G instrument

### Cat. No.

116005500

Grind, Homogenize and Lyse Any Sample in 40 Seconds or Less

# FastPrep-24™ Classic

- Consistent results
- Reliable
- Flexible
- Affordable
- 8,500 Citations
- High yields
- Power to homogenize resistant samples with ease



QuickPrep-1 sample holder included with instrument

- Interchangeable sample holders for flexibility in sample size and cryogenic lysis capability: 24 x 2 mL, 48 x 2 mL, 24 x 4.5 mL, 6 x 15 mL, 12 x 15 mL, or 2 x 50 mL
- High reproducibility with precise setting of lysis time and speed
- Eliminate cross contamination with single-use lysing matrix tubes
- Save up to 5 pre-set speed/time parameters
- Complete purification kits with Lysing Matrix available

## FastPrep Workflow



| Specifications                       |   |
|--------------------------------------|---|
| Time                                 | 1-60 seconds in 1 second increments       |
| Speed                                | 4.0 - 6.5 m/sec in 0.5 m/sec increments   |
| Acceleration                         | <2 seconds to max speed                   |
| Deceleration                         | <2 seconds to stop                        |
| Standard temperature operating range | 4-40 °C (39-104 °F)                       |
| Dimensions                           | Height - 465 mm, Oval Base - 437 x 332 mm |
| Weight                               | 17.5 kg (45 lb)                           |
| Power requirements                   | 90-250 V AC, 50/60 Hz, 1,200 W            |

| Product Name            | Cat. No.  |
|-------------------------|-----------|
| FastPrep-24™ instrument | 116004500 |

# Super FastPrep-2™

## Powerful and Portable Sample Lysis, Homogenization, and Grinding at Your Fingertips

FastPrep technology is now available in a lightweight, compact, hand-held format. An innovation in the sample lysis industry, the Super FastPrep-2™ is a portable, omni-directional bead beating system with a unique, patent-pending balanced crankshaft-slider mechanism.

When compared to traditional homogenization methods, such as vortexing, ultrasonication, rotor-stator homogenizers, grinding with a mortar and pestle, or chemical or enzymatic lysis, the Super FastPrep-2 will save hours of work. Lyse any tough or frozen sample in 5 seconds while still maintaining high yields of intact DNA, RNA and proteins.

A completely self-contained system, Super FastPrep-2 eliminates the risk of cross-contamination and time-consuming clean-up associated with manual lysis methods. Simply add sample and buffers to the Lysing Matrix tube containing specialized particles specific for your application. The ergonomic design ensures ease in loading sample tubes, which remain securely sealed during processing.

## Lyse Your Samples in 5 Seconds

- Omni-directional motion with the highest speed
- Handheld system for lab and field use
- Compatible with all FastPrep 2 mL Lysing Matrix tubes



| Specifications                   |  |
|----------------------------------|--|
| Disruption Principle             | Bead Beating                                     |
| Power Requirements               | 90-240 V for battery charger, cordless operation |
| Overall Length                   | 13"  |
| Overall Width                    | 3.4"   |
| Overall Height                   | 4.6"   |
| Weight                           | 2.2 kg   |
| Number of Tubes per Run          | 2  |
| Size of Tube                     | 2 mL tubes                                       |
| Maximum Speed                    | 4,400 cpm  |
| Minimum Speed                    | 500 cpm  |
| Type of Motion                   | Reciprocating                                    |
| Peak to Peak Amplitude of Motion | 1.5"   |
| Peak Acceleration                | Up to 500 g                                      |
| Sound at 1 ft.                   | 100 dB at 4,900 cpm<br>90 dB at 3,300 cpm        |
| Typical Run Time                 | 2-15 seconds at 3,300 cpm                        |

| Product Name                | Cat. No.  |
|-----------------------------|-----------|
| Super FastPrep-2 instrument | 116012500 |

# Sample Holders

## Sample Holders for FastPrep Systems are Flexible, Interchangeable, and Available for Ambient or Cryogenic Sample Types

MP Bio offers the widest selection of sample holders to best meet your needs in sample preparation. Our sample holders allow for sample sizes ranging from 2 to 250 mL tube size and are built for durability in ambient and cryogenic conditions.

### Ambient Temperature Sample Holders for FastPrep-24 and FastPrep-24 5G Instruments



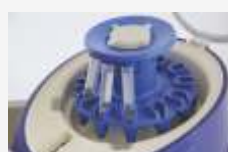
**QuickPrep™ Sample Holder**  
24 x 2 mL tubes (included with FastPrep-24™ instrument)  
Cat. No. 116002512



**QuickPrep™ 3 Sample Holder**  
24 x 2 mL tubes (included with FastPrep-24™ 5G instrument)  
Cat. No. 116005512



**BigPrep™ Sample Holder**  
2 x 50 mL tubes  
Cat. No. 116002525



**TeenPrep™ Sample Holder**  
12 x 15 mL tubes  
Cat. No. 116002526



**HiPrep™ Sample Holder**  
48 x 2 mL tubes  
Cat. No. 116002527



**TallPrep™ Sample Holder**  
24 x 4.5 mL tubes  
Cat. No. 116002540

### Cryogenic Temperature Sample Holders for FastPrep-24 and FastPrep-24 5G Instruments

During mechanical lysis, the temperature within the tube can increase and can cause damage to the molecules in your sample.

- **Protects thermosensitive molecules** from heat degradation due to an innovative design encompassing a cooling chamber.
- **Prevents the increase of sample temperature** during the homogenization process by maintaining sample temperature at 4°C.
- **Ensures a highly effective grinding process of any sample**, even the most elastic, by making them brittle.



**CoolPrep™ Sample Holder**  
24 x 2 mL tubes  
Cat. No. 116002528



**CoolTeenPrep™ Sample Holder**  
6 x 15 mL tubes  
Cat. No. 116002530



**CoolBigPrep™ Sample Holder**  
2 x 50 mL tubes  
Cat. No. 116002531

# Sample Holders

## Metal Sample Holders for FastPrep-24 and FastPrep-24 5G Instruments

All-Metal sample holders are ideally suited for work with highly infectious, pathogenic, or other biologically hazardous samples. They withstand temperatures up to 450°C, allowing for sterilization by pyrolysis or autoclaving. Pathogens, including bacteria, viruses, fungi, parasites, viroids, and prions, can be effectively eliminated. All-Metal sample holders are also safe to use with most laboratory detergents and sterilization solutions, ensuring easy care and maintenance.



**Metal BigPrep™ Sample Holder**  
2 x 50 mL tubes

Cat. No. 116002547



**Metal QuickPrep™ Sample Holder**  
24 x 2 mL tubes

Cat. No. 116002545



**Metal TeenPrep™ Sample Holder**  
12 x 15 mL tubes

Cat. No. 116002546

## FastPrep-96™ Sample Holders

FastPrep-96™ offers the widest variety of sample holders (2 x 96 deep well plates, 96 x 2 mL, 48 x 4.5 mL, 24 x 15 mL, 8 x 50 mL and 2 x 250 mL flasks) and a simple, accurate, closed loop control of lysing power and speed. All this and more make the FastPrep-96™ the perfect solution for all of your high volume sample preparation needs.



**BigFlex™ Sample Holder**  
8 x 50 mL tubes

Cat. No. 116010550



**TeenFlex™ Sample Holder**  
24 x 15 mL tubes

Cat. No. 116010560



**TallFlex™ Sample Holder**  
48 x 4.5 mL tubes

Cat. No. 116010580



**QuickFlex™ Sample Holder**  
96 x 2 mL tubes

Cat. No. 116010570



**LargeFlex™ Sample Holder**  
2 x 250 mL tube

Cat. No. 116010590



**Well Plate Adapter**  
2 x 96 deep well plates  
(included with FastPrep-96™ instrument)  
Cat. No. 119696168

## ConeFlex™ Legacy Sample Holder

ConeFlex™ Legacy Sample Holder allows any existing FastPrep-24™ Sample Holders to be used on the FastPrep-96™ instrument.



**ConeFlex™ Sample Holder Adapter**

Cat. No. 116010595

# Lysing Matrix

FastPrep® Lysing Matrix makes difficult-to-lyse samples easy. No matter how tough or resistant your samples are, our bead beating tubes will effectively disrupt cell walls, providing the highest yields of nucleic acids and proteins in a matter of seconds. Lysing Matrix tubes from MP Bio are highly reproducible with no cross-contamination. All Lysing Matrix tubes are standard sizes and fit just about any homogenizer on the market. We offer a wide variety of lysing beads and matrices to fit all sample types and applications.

- Optimal cell disruption for any sample
- Size and composition optimized according to sample type
- No cross contamination with closed Lysing Matrix tubes
- Available in 2 mL, 4.5 mL, 15 mL, 50 mL tubes or 96 well plates
- Fit any high-speed bead-beating homogenizers
- Validated worldwide with 3,000+ Lysing Matrix specific publications

FastPrep® Lysing Matrix tubes range from low to high impaction, breaking down any sample type whether the cell walls are hard or soft. Sample types include, but are not limited to, human, animal, and plant tissues; microorganisms like bacteria, yeast and fungi; soil; feces; plus insects and worms.

Impact-resistant Lysing Matrix tubes with beads are available in 2 mL, 4.5 mL, 15 mL, 50 mL and 96-well format sizes and contain a wide variety of materials to meet your lysing, grinding, and homogenization needs. All matrix particles are produced to the highest quality standards to ensure optimum performance. The lysing matrix particles are then dispensed into the Lysing Matrix tubes under a rigorous set of proprietary conditions, allowing complete confidence for immediate use.

For optimal performance and results, we recommend using the Lysing Matrix tubes in conjunction with our FastPrep instruments to ensure easy grinding, lysing, and homogenization of any sample type in seconds.

| Lysing Matrix | Matrix Composition   | Lysing Matrix | Matrix Composition  |
|---------------|--|---------------|---|
| ● A           | Garnet matrix and 1/4 inch banded sstellites                         | ○ I           | 2 mm yellow zirconium oxide beads and 4 mm black ceramic sphere       |
| ● B           | 0.1 mm silica spheres  | ● J           | 2 mm yellow zirconium oxide beads and 1.6 mm aluminum oxide particles |
| ● C           | 1 mm silica spheres  | ● K           | 0.8 mm zirconium silicate beads                                       |
| ● D           | 1.4 mm ceramic spheres   | ● M           | 1/4 inch ceramic beads  |
| ● E           | 1.4 mm ceramic spheres, 0.1 mm silica spheres, and 4 mm glass beads  | ○ S           | 1/8 inch stainless steel beads  |
| ○ F           | 1.6 mm aluminum oxide particles and 1.6 mm silicon carbide particles | ○ SS          | 6.35 mm stainless steel grinding balls                                |
| ● G           | 1.6 mm silicon carbide particles and 2 mm glass beads                | ● Y           | 0.5 mm diameter Ytria-stabilized zirconium oxide beads                |
| ● H           | 2 mm glass beads and 2 mm yellow zirconium oxide beads               | ● Z           | 2 mm diameter Ytria-stabilized zirconium oxide beads                  |



# Lysing Matrix

## Size

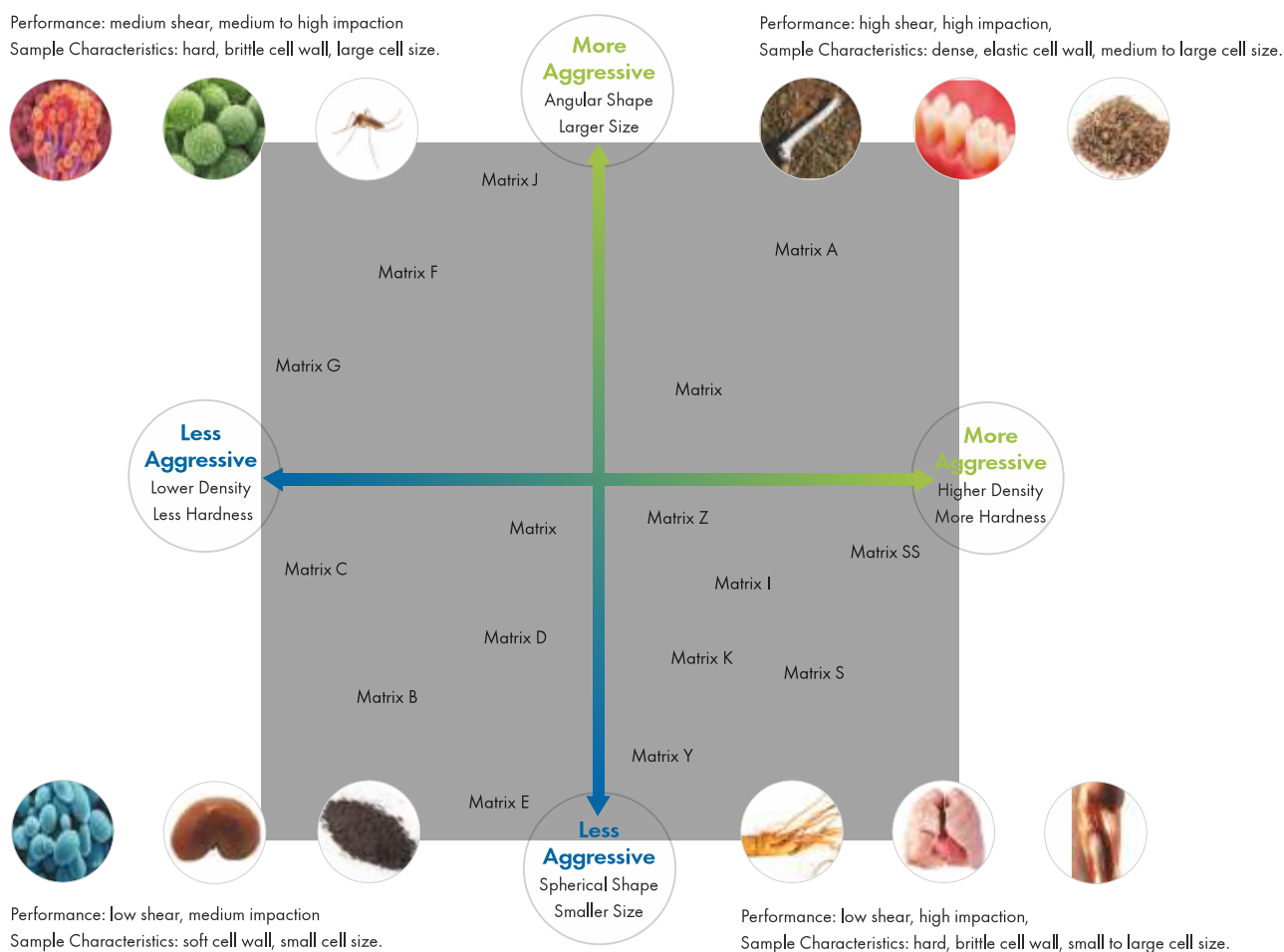
The smaller the particles used in the grinding media, the smaller the average particle size and the smaller the lowest-limiting particle size produced during pulverization. Matrix particle size should be selected based upon the size of the particles you wish to obtain in your lysate.

## Shape

The shape of the grinding media is a major determining factor in how cells are disrupted. Dull media, such as spherical beads, utilize cascade impaction (hammering) as the main force for cell lysis. Sharp and angular shaped media will primarily generate mechanical shear forces (chopping and cutting) which can quickly open difficult cell walls, grind fibrous or elastic animal tissue, or crack spores or oocytes. Shear forces are preferable when isolating stable molecules such as DNA, stable proteins, structural polysaccharides and small molecules or metabolites. RNA and certain easily denatured proteins can be quickly degraded by shear forces, so care needs to be taken when using angular media. For isolation of these molecules, smooth impactor grinding media can be much more forgiving.

## Hardness, Density, and Composition

The composition determines two very important qualities: hardness and density, both of which are inherent physical properties derived from the molecular composition of the matrix particle. The hardness must be greater than that of the sample being pulverized, with higher hardness values being more effective at disrupting hard and brittle cell membranes. Hardness and density values help optimize lysis efficiency while preserving the integrity of the analytes of interest.



# Ready-to-Use Lysing Matrix

| Sample Type  |  | Lysing Matrix |   |   |   |   |   |   |   |   |   |   |   |   |    |   |   |
|--|--|---------------|---|---|---|---|---|---|---|---|---|---|---|---|----|---|---|
|  |  | A             | B | C | D | E | F | G | H | I | J | K | M | S | SS | Y | Z |
| Soft Tissues   | Animal & Human Tissues   |               |   |   |   |   |   |   |   |   |   |   |   |   |    |   |   |
|  | Lung, Breast, Kidney, Heart, Intestine, Muscle, Spleen, Liver, Brain | •             |   |   | • |   |   |   |   |   |   |   |   | • | •  |   | • |
|  | Skin   | •             |   |   | • |   |   |   |   |   |   |   |   |   |    |   |   |
|  | Nail   |               |   |   |   |   |   |   |   |   |   |   |   | • |    |   |   |
|  | Tail, Ear  | •             |   |   |   |   |   |   |   |   |   |   |   | • |    |   |   |
|  | Vascular tissue  | •             |   |   | • |   |   |   |   |   |   |   |   |   |    |   | • |
|  | Hair   |               |   |   |   |   |   |   |   |   |   |   |   | • |    |   |   |
|  | Bone   | •             |   |   |   |   |   |   |   |   |   | • | • | • | •  |   |   |
|  | Tumor  | •             |   |   |   |   |   |   |   |   |   |   |   | • |    |   |   |
|  | Mammalian cell   | •             |   |   | • |   |   |   |   |   |   |   |   |   |    |   | • |
| Infected tissue (isolation of viruses or virus)                                |  |               |   |   |   |   |   |   |   |   |   |   | • |   |    |   |   |
| <b>Microorganisms</b>  |  | A             | B | C | D | E | F | G | H | I | J | K | M | S | SS | Y | Z |
| Bacteria (gram + and -)  |  | •             | • |   |   |   | • |   |   |   | • |   |   |   |    |   |   |
| Yeast, Mold  |  | •             |   | • |   |   | • | • |   |   |   | • |   |   |    | • |   |
| Bacterial & Fungal spore   |  | •             | • |   |   |   | • | • |   | • | • | • |   |   | •  |   |   |
| Algae  |  | •             |   | • |   |   |   | • |   |   |   |   |   |   |    | • |   |
| Virus  |  | •             | • |   |   |   |   |   |   |   |   |   |   |   |    |   |   |
| <b>Environmental Samples</b>   |  | A             | B | C | D | E | F | G | H | I | J | K | M | S | SS | Y | Z |
| Soil, Marine sediment, Rhizosphere, Manure, Compost, Sludge, Feces, Wastewater |  |               |   |   |   | • |   | • | • | • |   |   |   |   |    |   |   |
| <b>Plant Tissues</b>   |  | A             | B | C | D | E | F | G | H | I | J | K | M | S | SS | Y | Z |
| Leaf   |  | •             |   |   | • |   | • | • |   |   |   |   |   |   |    |   | • |
| Seed   |  | •             |   |   |   |   | • | • | • | • |   |   | • | • | •  |   |   |
| Root   |  | •             |   |   |   |   | • | • |   |   |   |   |   | • |    |   |   |
| Needle   |  | •             |   |   |   |   | • | • |   |   |   |   | • | • |    |   |   |
| Wood   |  | •             |   |   |   |   | • | • | • | • |   |   |   |   |    |   |   |
| Stem, Flower   |  | •             |   |   | • |   | • | • |   |   |   |   |   |   |    |   | • |
| <b>Insects &amp; Worms</b>   |  | A             | B | C | D | E | F | G | H | I | J | K | M | S | SS | Y | Z |
| Tick, Fly  |  | •             |   |   | • |   |   |   | • | • |   |   |   |   |    |   | • |
| Nematode   |  | •             |   | • | • |   |   |   |   |   |   |   |   |   |    |   | • |
| Bee, Mosquito  |  | •             |   |   | • |   |   |   |   |   |   |   |   |   |    |   | • |

# Lysing Matrix Tubes

| Description     | Pack Size         | Cat. No.  |
|-----------------|-------------------|-----------|
| Lysing Matrix A | 50 x 2mL          | 116910050 |
|                 | 100 x 2mL         | 116910100 |
|                 | 500 x 2mL         | 116910500 |
| Lysing Matrix A | 25 x 4.5mL        | 116970025 |
|                 | 50 x 4.5mL        | 116970050 |
|                 | 100 x 4.5mL       | 116970100 |
| Lysing Matrix A | 5 x 15mL          | 116930005 |
|                 | 25 x 15mL         | 116930025 |
|                 | 50 x 15mL         | 116930050 |
| Lysing Matrix A | 10 x 50mL         | 116950010 |
|                 | 50 x 50mL         | 116950050 |
|                 | 100 x 50mL        | 116950100 |
|                 | 500 x 50mL        | 116950500 |
| Lysing Matrix A | 96-well Rack      | 116980001 |
|                 | 10 x 96-well Rack | 116980010 |
| Lysing Matrix B | 50 x 2mL          | 116911050 |
|                 | 100 x 2mL         | 116911100 |
|                 | 500 x 2mL         | 116911500 |
| Lysing Matrix B | 25 x 4.5mL        | 116971025 |
|                 | 50 x 4.5mL        | 116971050 |
|                 | 100 x 4.5mL       | 116971100 |
| Lysing Matrix B | 5 x 15mL          | 116931005 |
|                 | 25 x 15mL         | 116931025 |
|                 | 50 x 15mL         | 116931050 |
| Lysing Matrix B | 10 x 50mL         | 116951010 |
|                 | 50 x 50mL         | 116951050 |
|                 | 100 x 50mL        | 116951100 |
|                 | 500 x 50mL        | 116951500 |
| Lysing Matrix B | 96-well Rack      | 116981001 |
|                 | 10 x 96-well Rack | 116981010 |
| Lysing Matrix C | 50 x 2mL          | 116912050 |
|                 | 100 x 2mL         | 116912100 |
|                 | 500 x 2mL         | 116912500 |
| Lysing Matrix C | 25 x 4.5mL        | 116972025 |
|                 | 50 x 4.5mL        | 116972050 |
|                 | 100 x 4.5mL       | 116972100 |
| Lysing Matrix C | 5 x 15mL          | 116932005 |
|                 | 25 x 15mL         | 116932025 |
|                 | 50 x 15mL         | 116932050 |

| Description     | Pack Size         | Cat. No.  |
|-----------------|-------------------|-----------|
| Lysing Matrix C | 10 x 50mL         | 116952010 |
|                 | 50 x 50mL         | 116952050 |
| Lysing Matrix C | 96-well Rack      | 116982001 |
|                 | 10 x 96-well Rack | 116982010 |
| Lysing Matrix D | 50 x 2mL          | 116913050 |
|                 | 100 x 2mL         | 116913100 |
|                 | 500 x 2mL         | 116913500 |
| Lysing Matrix D | 25 x 4.5mL        | 116973025 |
|                 | 50 x 4.5mL        | 116973050 |
|                 | 100 x 4.5mL       | 116973100 |
| Lysing Matrix D | 5 x 15mL          | 116933005 |
|                 | 25 x 15mL         | 116933025 |
|                 | 50 x 15mL         | 116933050 |
| Lysing Matrix D | 10 x 50mL         | 116953010 |
|                 | 50 x 50mL         | 116953050 |
|                 | 100 x 50mL        | 116953100 |
|                 | 500 x 50mL        | 116953500 |
| Lysing Matrix D | 96-well Rack      | 116983001 |
|                 | 10 x 96-well Rack | 116983010 |
| Lysing Matrix E | 50 x 2mL          | 116914050 |
|                 | 100 x 2mL         | 116914100 |
|                 | 500 x 2mL         | 116914500 |
| Lysing Matrix E | 25 x 4.5mL        | 116974025 |
|                 | 50 x 4.5mL        | 116974050 |
|                 | 100 x 4.5mL       | 116974100 |
| Lysing Matrix E | 5 x 15mL          | 116934005 |
|                 | 25 x 15mL         | 116934025 |
|                 | 50 x 15mL         | 116934050 |
| Lysing Matrix E | 10 x 50mL         | 116954010 |
|                 | 50 x 50mL         | 116954050 |
|                 | 100 x 50mL        | 116954100 |
| Lysing Matrix E | 96-well Rack      | 116984001 |
|                 | 10 x 96-well Rack | 116984010 |
| Lysing Matrix F | 50 x 2mL          | 116915050 |
|                 | 100 x 2mL         | 116915100 |
|                 | 500 x 2mL         | 116915500 |
| Lysing Matrix G | 50 x 2mL          | 116916050 |
|                 | 100 x 2mL         | 116916100 |

# Lysing Matrix Tubes

| Description      | Pack Size   | Cat. No.  |
|------------------|-------------|-----------|
| Lysing Matrix H  | 50 x 2mL    | 116917050 |
|                  | 100 x 2mL   | 116917100 |
| Lysing Matrix I  | 50 x 2mL    | 116918050 |
|                  | 100 x 2mL   | 116918100 |
| Lysing Matrix J  | 50 x 2mL    | 116919050 |
|                  | 100 x 2mL   | 116919100 |
| Lysing Matrix K  | 50 x 2mL    | 116920050 |
|                  | 100 x 2mL   | 116920100 |
| Lysing Matrix M  | 50 x 2mL    | 116923050 |
|                  | 100 x 2mL   | 116923100 |
|                  | 500 x 2mL   | 116923500 |
| Lysing Matrix M  | 25 x 15mL   | 116939025 |
|                  | 50 x 15mL   | 116939050 |
| Lysing Matrix M  | 10 x 50mL   | 116959010 |
|                  | 50 x 50mL   | 116959050 |
| Lysing Matrix S  | 50 x 2mL    | 116925050 |
|                  | 100 x 2mL   | 116925100 |
|                  | 500 x 2mL   | 116925500 |
| Lysing Matrix S  | 5 x 15mL    | 116938005 |
|                  | 25 x 15mL   | 116938025 |
|                  | 50 x 15mL   | 116938050 |
| Lysing Matrix SS | 10 x 50mL   | 116941010 |
|                  | 50 x 50mL   | 116941050 |
|                  | 100 x 50mL  | 116941100 |
| Lysing Matrix Y  | 50 x 2mL    | 116960050 |
|                  | 100 x 2mL   | 116960100 |
|                  | 500 x 2mL   | 116960500 |
| Lysing Matrix Y  | 25 x 4.5mL  | 116977025 |
|                  | 50 x 4.5mL  | 116977050 |
|                  | 100 x 4.5mL | 116977100 |
| Lysing Matrix Y  | 5 x 15mL    | 116975005 |
|                  | 25 x 15mL   | 116975025 |
|                  | 50 x 15mL   | 116975050 |
| Lysing Matrix Y  | 10 x 50mL   | 116976010 |
|                  | 50 x 50mL   | 116976050 |

| Description     | Pack Size         | Cat. No.  |
|-----------------|-------------------|-----------|
| Lysing Matrix Y | 96-well Rack      | 116960001 |
|                 | 10 x 96-well Rack | 116960010 |
| Lysing Matrix Z | 50 x 2mL          | 116961050 |
|                 | 100 x 2mL         | 116961100 |
|                 | 500 x 2mL         | 116961500 |
| Lysing Matrix Z | 25 x 4.5mL        | 116985025 |
|                 | 50 x 4.5mL        | 116985050 |
|                 | 100 x 4.5mL       | 116985100 |
| Lysing Matrix Z | 5 x 15mL          | 116978005 |
|                 | 25 x 15mL         | 116978025 |
|                 | 50 x 15mL         | 116978050 |
| Lysing Matrix Z | 10 x 50mL         | 116979010 |
|                 | 50 x 50mL         | 116979050 |
| Lysing Matrix Z | 96-well Rack      | 116961001 |
|                 | 10 x 96-well Rack | 116961010 |

## Biopulverizer System I

Cat. No. 116750200

The perfect starter pack for new FastPrep™ instrument owners. Suitable for all sample types. System I contains Lysing Matrix A, B, C, D, E.

## Biopulverizer System II

Cat. No. 116850200

The perfect pack for processing difficult samples, such as skeletal muscle, pancreas, lung, heart, bone, seeds and spores. System II contains Lysing Matrix F, G, H, I, J.



**ORDER NOW!**

[www.mpbio.com](http://www.mpbio.com)

## Metal Lysing Matrix Tubes

Stainless Steel Lysing Matrix tubes are ideal for grinding, lysing, and homogenizing your most resistant samples! Constructed from 308 SS, these tubes and grinding matrix are tough enough to stand up to the most demanding mechanical punishment that can cause traditional thermoplastic tubes to crack. Our tubes are machined from premium grade billet and deliver superior strength over less expensive production methods such as deep-drawn aluminum tubes. An oblique angle conical bottom provides a better impact surface than the rounded bottoms of deep-drawn tubes.

The stainless steel threaded cap provides a leak-proof closure without the energy-robbing alternatives like plastic flange screw caps or rubber stoppers. A Teflon O-ring prevents leakage, and can be cleaned with detergent and/or autoclaving, or replaced entirely between samples. Machined knurls on the cap provide a firm grip for easy opening and closing.

Two different impactors are available, a single Stainless Steel Ball, ¼" diameter; or a Stainless Steel Cylinder, ¼" diameter x ½" length.



### Applications

- Dry grinding very tough or hard samples where heat generation can damage plastic tubes
- Cryogenic dry grinding where severe cold temps (dry ice or LN<sub>2</sub>) can damage plastic tubes
- Milling or grinding non-biological samples where plastic contamination is of concern
- Sample processing with solvents or chemicals that are incompatible with plastics

### Research Areas and Sample Types

- **Environmental and Agriculture**  
Tough seeds such as dried corn, soybeans, wheat, tomato, and chile; wood, bark, roots; animal claws and hooves
- **Forensics**  
Bone, teeth, hair, fingernails, and non-biological substrates
- **Cancer and Disease**  
Tough tissues, bone, cartilage, and skin
- **Industrial**  
Non-biological, rocks and minerals, plastics and composites, printed circuit boards, wood and building materials

| Description                                     | Pack Size | Cat. No.  |
|---|-----------|-----------|
| Metal Lysing tube, 2 mL, w/ Grinding Ball       | 2 Each    | 116991002 |
|   | 3 Each    | 116991003 |
|   | 6 Each    | 116991006 |
| Metal Lysing tube, 2 mL, w/ Grinding Cylinder   | 2 Each    | 116992002 |
|   | 3 Each    | 116992003 |
|   | 6 Each    | 116992006 |
| Replacement O-rings for Metal Lysing Tube, 2 mL | 50 Each   | 116990100 |