



*Providing Multilevels of Biocontainment  
for Laboratory Safety*

**BIOSAFE<sup>†</sup> CENTRIFUGE SYSTEMS**



# Multilevels of Biocontainment

Containment of biological agents and infectious substances is an essential element in maintaining a safe environment for biomedical and microbiological laboratories, Biosafety Levels labs, and vaccine production facilities. Preventing the release of hazardous aerosols into a lab during centrifugation requires good laboratory practices and properly designed equipment and enclosures. Designing safe innovative features into each of our centrifuges, rotors and labware has always been a priority of Beckman Coulter. Now, with the increased focus on biodefense, bioterrorism, the need for additional vaccine research and development, and soaring premiums for workers' compensation, we are pleased to introduce a series of bench, high-performance and ultracentrifuge containment systems with multilevels of protection that provide enhanced biosafety without compromising functionality or convenience.

## The First Level of Containment is Labware

Designed with your safety in mind and manufactured to the highest standards in the industry for durability and use.



4 x 750 mL  
Swinging Bucket Rotor  
(SX4750) with Biocertified  
Covers

### Aerosolve® Cannisters/Biocertified Covers

- Transparent design enables you to check for broken labware
- Protection from aerosol leakage and spills from rotor buckets
- Third-party tested for biocontainment\*
- Bucket covers for 1.5 mL tubes to 750 mL bottles
- Microplate carrier covers for 96-well plate format



Exclusive  
Aerosolve  
Cannister

### HarvestLine System Liners

- Reduce contact with infectious samples by retaining the pelleted sample directly in the liner
- Disposable liners eliminate time-consuming manual scraping of harvested solids from labware
- Minimize exposure of aerosols with a patented self-sealing stem that conveniently accommodates a funnel for filling directly from a fermenter
- Pelleted samples remain safely in the liner after decanting for immediate use or for freezer storage at temperatures as low as -70°C



Disposable HarvestLine  
System Liners

### OptiSeal™ Tubes

- Minimize risk of sample exposure by eliminating the need for tube puncturing or slicing at the end of a run
- Eliminate aerosol formation that can result from using heat sealing devices
- Easy-filling wide neck and no-tool, one touch sealing minimize handling or sample exposure



One-touch Sealing OptiSeal  
Ultracentrifuge Tubes

Bios

# The Second Level of Containment is the Rotor

Security from aerosols is included in the design of our rotors. Dual-locking lids allow the removal and transport of the rotor to a safety hood. In addition, many rotors are certified for biocontainment by third-party testing.\*



## Patented Fluid Containment Annulus

- A patented fluid containment annulus eliminates leaks into the centrifuge chamber by holding the entire tube contents in the rotor - even if all the tubes leak at once

## Dual-Locking Lid

- Enables the rotor to remain biosealed while being carried to a biocontainment hood for sample retrieval

## Third-Party Certification

- Documented independent third-party testing for successful containment\*



## Large-Volume Cannister Systems

- Provide a secure seal in the event of a bottle leakage, with double sealing cap and plug assemblies
- Prevent aerosol contamination with an integrated 0.3 micron filter in the cap assembly



**Integrated Double-Seal  
JLA-8.1000 Rotor**



**Fluid Containment  
Annulus for the  
1 million x g  
MLA-130 Rotor**

**Dual-Locking Lid  
Shown for the 6 x 250 mL  
JLA-16.250 Rotor**

## Ultracentrifuge Rotors

- Lid and cap assemblies for fixed-angle and swinging-bucket rotors are designed to create a hermetic seal with the O-ring when used in a hard-vacuum environment (less than 3 Pa), making them - by definition - biocontained.

\*Validation was done at CAMR, Porton Down, UK, or USAMRIID, Ft. Detrick, MD, USA

# The Third Level of Containment is the Centrifuge

Centrifuges provide the final level of containment against hazardous aerosols and splashes with HEPA (High Efficiency Particle Arresting) filtration. For tabletop ultracentrifugation, an additional level of security can be achieved by moving this compact instrument into a biocontainment hood when necessary.

The BioSafety Centrifuge Systems' unique multilevel approach to containment provides the most comprehensive solution to biosafety. It is available exclusively from Beckman Coulter, the leading centrifuge manufacturer. When working with infectious agents, you can feel confident using the BioSafe Centrifuge System as your first line of defense.



**Avanti® J-20XPI  
High-Performance  
Centrifuge**



**Optima™ MAX  
Tabletop Ultracentrifuge**



**Optima L-100 XP  
Ultracentrifuge**

<sup>†</sup>BioSafe is a term intended to describe the enhanced Biosafety features of our products

For additional information, please contact your local Beckman Coulter representative or visit our web site at:

[www.beckmancoulter.com/biosafe](http://www.beckmancoulter.com/biosafe)



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