

# BECKMAN COULTER LIFE SCIENCES

# CENTRIFUGATION SOLUTIONS



BENCHTOP CENTRIFUGES



MICROCENTRIFUGES



HIGH-PERFORMANCE &  
HIGH-CAPACITY CENTRIFUGES



ROTORS & ACCESSORIES





# CENTRIFUGATION SOLUTIONS

We introduced the first commercial ultracentrifuge in 1947, and we haven't stopped innovating since. Fast forward to today and you'll discover that we've advanced centrifugation technology at a pace unmatched in the industry. All so you can advance your research and discovery at speeds that were once unimaginable.

Designed as a complete solution from tube to rotor to centrifuge, our broad centrifugation product portfolio delivers brilliance at every turn.



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## MOST POPULAR CENTRIFUGE PACKAGES

### Cell Culture Packages

15 mL & 50 mL conical tube adapters\*

US VWR NUMBER	Model	Description
BKC19416	<p><b>Reliable performance with enhanced BioSafe options</b></p> <p><b>Refrigerated Avanti J-15R</b>, IVD, 120 V, 60 Hz, Cell Culture Package, 3 Liter System</p>	<ul style="list-style-type: none"> <li>• Avanti J-15R Series Instrument</li> <li>• JS 4.750 Swinging-bucket Rotor</li> <li>• Adapters for 50 mL Conical Tubes (2 sets of 2) (each adapter holds 4 x 50 mL conical tubes)</li> <li>• Adapters for 15 mL Conical Tubes (2 sets of 2) (each adapter holds 14 x 15 mL conical tubes)</li> <li>• 1-year warranty (extended warranties available)</li> </ul>
BKB08708	<p><b>Compact, multipurpose centrifuge for clinical research and cell culture labs</b></p> <p><b>Refrigerated Allegra X-30R</b>, IVD, 120 V, 60 Hz, Cell Culture Package, 18-inch footprint, 1.6 Liter System</p>	<ul style="list-style-type: none"> <li>• Allegra X-30R Series Instrument</li> <li>• SX4400 Swinging-bucket Rotor</li> <li>• Adapters for 50 mL Conical Tubes (2 sets of 2) (each adapter holds 4 x 50 mL conical tubes)</li> <li>• Adapters for 15 mL Conical Tubes (2 sets of 2) (each adapter holds 9 x 15 mL conical tubes)</li> <li>• 1-year warranty (extended warranties available)</li> </ul>
BKB08705	<p><b>Compact, multipurpose centrifuge for clinical research and cell culture labs</b></p> <p><b>Non-Refrigerated Allegra X-30</b>, IVD, 120 V, 60 Hz, Cell Culture Package, 18-inch footprint 1.6 Liter Package</p>	<ul style="list-style-type: none"> <li>• Allegra X-30R Series Instrument</li> <li>• SX4400 Swinging-bucket Rotor</li> <li>• Adapters for 50 mL Conical Tubes (2 sets of 2) (each adapter holds 4 x 50 mL conical tubes)</li> <li>• Adapters for 15 mL Conical Tubes (2 sets of 2) (each adapter holds 9 x 15 mL conical tubes)</li> <li>• 1-year warranty (extended warranties available)</li> </ul>
76521-726	<p><b>Versatile workhouse all in a compact footprint</b></p> <p><b>Refrigerated Allegra V-15R</b>, IVD, 120 V, 60 Hz, Cell Culture Package, 23-inch footprint, 3 Liter System</p>	<ul style="list-style-type: none"> <li>• Allegra V-15R Series Instrument</li> <li>• VS 4.750 Swinging-bucket Rotor</li> <li>• 12 x 15 mL Tube Adapter Set</li> <li>• 5 x 50 mL Tube Adapter Set</li> <li>• 2-year warranty (extended warranties available)</li> <li>• Optional cart available</li> </ul>

IVD: In Vitro Diagnostics

BioCertified is a term used to describe our products which have been tested and validated to demonstrate containment of microbiological aerosols by an independent, third-party facility. Improper use or maintenance may affect seal integrity and, thus, containment.

\* Plates added separately

## MOST POPULAR CENTRIFUGE PACKAGES

### Clinical Packages (Blood Tubes Centrifuges)

Popular for blood, urine, flow cytometry, etc. Contact your representative for information on refrigeration needs.

US VWR NUMBER	Model	Description
BKB05796	<b>Clinical Applications Package</b> <b>Non-Refrigerated Allegra X-30 instrument, IVD, 120 V, 60 Hz, Ambient Benchtop Centrifuge, 1.6 Liters</b>	<ul style="list-style-type: none"> <li>• Allegra X-30 ventilated instrument</li> <li>• SX4400 Swinging-bucket Rotor</li> <li>• Vacutainer/RIA Adapters/Hemolyse for 10 mL, 16 mm Tubes (2 sets of 2) (each adapter holds 12 tubes)</li> <li>• Vacutainer/Hemolyse/ RIA Adapters for 5 mL, 13 mm Tubes (2 sets of 2) (each adapter holds 16 tubes)</li> <li>• 1-year warranty (extended warranties available)</li> </ul>
BKB05802	<b>Clinical Applications Package</b> <b>Refrigerated Allegra X-30R instrument, IVD, 120 V, 60 Hz, Refrigerated Benchtop Centrifuge, 1.6 Liters</b>	<ul style="list-style-type: none"> <li>• Allegra X-30 refrigerated instrument.</li> <li>• SX4400 Swinging-bucket Rotor</li> <li>• Vacutainer/RIA Adapters/Hemolyse for 10 mL, 16 mm Tubes (2 sets of 2) (each adapter holds 12 tubes)</li> <li>• Vacutainer/Hemolyse/RIA Adapters for 5 mL, 13 mm Tubes (2 sets of 2) (each adapter holds 16 tubes)</li> <li>• 1-year warranty (extended warranties available)</li> </ul>
76521-716	<b>Blood Sample Package</b> <b>Refrigerated Allegra V-15R instrument, IVD, 120 V, 60 Hz, Refrigerated Benchtop Centrifuge, 3 Liters</b>	<ul style="list-style-type: none"> <li>• Allegra V-15R Series Instrument</li> <li>• VS 4.750 Swinging-bucket Rotor</li> <li>• BioSafe bucket covers.</li> <li>• 12.8 mm adapters for 5 mL blood tubes (2 sets of 2) (each adapter holds 37 tubes)</li> <li>• 13.8 mm for 7 mL blood tubes (2 sets of 2) (each adapter holds 23 tubes)</li> <li>• 17.5 mm adapters for 10 mL blood tubes (each adapter holds 19 tubes)</li> <li>• 2-year warranty (extended warranties available)</li> <li>• Optional cart available</li> </ul>

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## MOST POPULAR CENTRIFUGE PACKAGES

### Microcentrifuge Packages

Will only spin 1.5/2ml tubes. Can do PCR tubes in adapters.

US VWR NUMBER	Model	Description
89429-550	<b>Refrigerated Microfuge 20R</b> with 36 place BioCertified rotor	<ul style="list-style-type: none"> <li>• Refrigerated Microfuge 20R</li> <li>• FA361.5 Rotor - 36 place BioCertified aluminum rotor with aerosol tight lid</li> <li>• Max Force of 20,627 x g</li> <li>• 2-year warranty</li> </ul>
89429-548	<b>Refrigerated Microfuge 20R</b> with 24 place Aluminum rotor	<ul style="list-style-type: none"> <li>• Refrigerated Microfuge 20R</li> <li>• FA 241.5 Rotor - 24 place aluminum rotor with a snap-on lid</li> <li>• Max Force of 20,627 x g</li> <li>• 2-year warranty</li> </ul>
89429-540	<b>Non-Refrigerated Microfuge 20</b> with 24 place polypropylene rotor	<ul style="list-style-type: none"> <li>• Non-refrigerated Microfuge 20</li> <li>• FA 241.5P Rotor - 24 place polypropylene rotor with a snap-on lid</li> <li>• Max Force of 20,627 x g</li> <li>• 2-year warranty</li> </ul>
BKA46472	<b>Non-Refrigerated Microfuge 16</b> with 24 place polypropylene rotor	<ul style="list-style-type: none"> <li>• Non-refrigerated Microfuge 16</li> <li>• FX 241.5P Rotor - 24 place polypropylene rotor</li> <li>• Max Force of 16,163 x g</li> <li>• Contact your Rep. for warranty information.</li> </ul>

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# BENCHTOP CENTRIFUGES

## Allegra V-15R Benchtop Centrifuge

*Versatile performance meets simplicity*

The Allegra V-15R centrifuge is designed to be a workhorse in the lab. Operation is simple and seamless thanks to an easy-to-use interface and ergonomic design. And with 10 rotor options at your fingertips, you will be ready and able to support multiple workflows with just one instrument.



### KEY ADVANTAGES

- **Compact Design**
- **Enhanced Safety Features**
- **Increased Versatility**



#### Compact Design

Its compact footprint frees up space on your bench. Optional Mobile Cart with locking wheels allows you to roll it around and lock it down — with space to store rotors and adapters, and improved access with low deck height of 23 inches.



#### Enhanced Safety Features

BioSafe\* rotors, automatic rotor recognition and built-in imbalance sensor help you ensure safe and efficient operation.



#### Increased Versatility











10 rotors and a comprehensive selection of adapters support a variety of applications — from 750 mL to microcentrifuge tubes and 96-well plates. Our rotor library also includes specialized configurations such as the dedicated high-speed VS-2.5-96 rotor, which can be used for high-throughput processing of DNA or RNA kits in 96-well formats.

#### Versatility of the Swinging-Bucket Rotor – one yoke for three configurations

4 x 750 mL swinging-bucket rotor with several configurations. Easily exchange buckets for microplate carriers or hexagonal buckets.

\* BioSafe and BioSafety are terms intended to describe the enhanced biocontainment features of our products.

## ALLEGRA V-15R AVAILABLE ROTORS

US VWR NUMBER	Rotor	Type Of Rotor	Capacity	Max RPM / RCF X g, 120V <sup>‡</sup>	Max RPM / RCF X g, 208V <sup>‡</sup>
76521-750	 VS 4.750 <sup>‡‡</sup> BIOC	Swinging-bucket rotor	4 x 750 mL ***	4,500 / 4,264	4,700 / 4,651
76521-754	 VS 4.750-96	Swinging-bucket rotor	4 x 4 microplate rotor	4,500 / 3,561	4,700 / 3,884
76521-752	 VS 4.750-Hex	Swinging hexagonal-bucket rotor	4 x 25 x 10 mL Up to 100 10 mm tubest <sup>†</sup>	4,300 / 3,748	4,700 / 4,478
76521-756	 VS 2.5-96 <sup>††</sup> BIOC	Swinging-bucket rotor	Two-place for microplates <sup>††</sup>	5,400 / 4,932	5,700 / 5,495
76521-738	 VF 48.2 BIOC	Fixed-Angle	48 x 2 mL	13,500 / 20,412	13,500 / 20,412
76521-744	 VFC 8.50 BIOC	Fixed-Angle	8 x 50 mL conical	11,360 / 15,032	11,360 / 15,032
76521-746	 VF 6.94 BIOC	Fixed-Angle	6 x 94 mL	10,000 / 11,872	10,000 / 11,872
76521-742	 VFC 24.15	Fixed-Angle	24 x 15 mL conical	9,000 / 11,431	9,000 / 11,431
76521-740	 VF 100.2	Fixed-Angle	100 x 2 mL	(outer row RCF at r max 163 mm): 6,500/7,713 (inner row RFC at r max 151 mm): 6,500 / 7,145	(outer row RCF at r max 163 mm): 6,500/7,713 (inner row RFC at r max 151 mm): 6,500 / 7,145
76521-748	 VF 6.250 BIOC	Fixed-Angle	6 x 250 mL	5,540 / 4,824	5,540 / 4,824

<sup>‡</sup> See rotor IFU (C63132) for specifications for 4° C operation.

<sup>‡‡</sup> The VS 4.750 Swinging-bucket rotor is BioCertified when used with the optional BioSafe bucket covers. Bucket covers are sold separately.





\*\*\* Adapters for the VS 4.750 Swinging-bucket rotor for bottles and tubes from 500 mL to 2 mL are available. Please refer to the rotor IFU (C63132).

<sup>†</sup> Adapters for VS 4.750-Hex rotor for 17.5 mm and 13.5 mm blood collection tubes available. Adapters for 17 mm and 13 mm diameter tubes for the Beckman Coulter AutoMate 2500 family available.

<sup>††</sup> The VS 2.5-96 Swinging-bucket rotor is only BioCertified when used with the covers. The covers are included with the purchase of the rotor and not a separate line item. Each bucket can hold up to five stacked 96-well plates or a plate up to 93 mm without BioSafe lid; with BioSafe lid it is 80 mm.

**BIOC** BioCertified is a term used to describe our products which have been tested and validated to demonstrate containment of microbiological aerosols by an independent, third-party facility (CAMR, Porton Down, UK, or USAMRIID, Ft. Detrick, MD, USA, or TÜV NORD CERT GmbH Große Bahnstraße 31 Hamburg, Germany). Improper use or maintenance may affect seal integrity and, thus, containment.

## ALLEGRA V-15R APPLICATION PACKAGES

Allegra V-15R Application Package Description	US VWR NUMBER General Purpose <sup>1</sup> 120V, 60HZ	US VWR NUMBER IVD <sup>2</sup> 120V, 60HZ	
<p><b>High-Throughput Cell Culture Package</b></p> <p>Includes: Instrument, VS 4.750 swinging-bucket rotor, 15x15 mL and 7x50 mL conical tube adapters (qty of 4 each).</p> <p>Wash, clarify, concentrate, harvest and separate cells and tissues from cultures. From mammalian to bacterial cells and everything in between, our High-Throughput Cell Culture Package is designed to deliver the results you need. Run 60, 15 mL conical tubes and 28, 50 mL conical tubes for your cell culture workflows. Not compatible with BioSafe bucket covers.</p>	76521-726	76521-728	
<p><b>Blood Sample Preparation Package</b></p> <p>Includes: Instrument, VS 4.750 swinging-bucket rotor, BioSafe bucket covers, and 12.8 mm and 13.8 mm and 17.5 mm adapters (qty of 4 each).</p> <p>Processing up to 148, 12.8 mm diameter blood tubes, 92, 13.8 mm diameter blood tubes or 76, 17.5 mm diameter blood tubes per run. Our Blood Sample Preparation packages deliver the speed and flexibility your busy laboratory needs.</p>	76521-714	76521-716	
<p><b>High-Capacity Blood Sample Package</b></p> <p>Includes: Instrument VS 4.750-Hex swinging-bucket rotor and adapters 13.5 mm, and 17.5 mm round-bottom blood tubes (qty of 4 each).</p> <p>Maximize throughput and capacity—processing up to 144, 13.5 mm diameter blood tubes or 100, 17.5 mm diameter blood tubes per run.</p>	76521-718	76521-720	
<p><b>Swinging-Bucket Package</b></p> <p>Includes: Instrument and VS 4.750 swinging-bucket rotor.</p> <p>Achieve great versatility all in one rotor with the ability to swing 4x750 mL bottles or other common tubes and bottles with our selection of adapters.</p>	76521-710	76521-712	

<sup>1</sup> General Purpose. Not intended or validated for use in the diagnosis of disease or other conditions.

<sup>2</sup> In Vitro Diagnostics Use.



## ALLEGRA V-15R APPLICATION PACKAGES

Allegra V-15R Application Package Description	US VWR NUMBER General Purpose <sup>1</sup> 120V, 60HZ	US VWR NUMBER IVD <sup>2</sup> 120V, 60HZ	
<p><b>BioSafe Swinging-Bucket Package</b></p> <p>Includes: Instrument, VS 4.750 swinging-bucket rotor and BioSafe bucket covers (qty 4).</p> <p>Minimize contamination from broken or leaking tubes with BioSafe bucket covers, contributing to laboratory safety. Each cover seals with an O-ring and is autoclavable up to 121° C for 20 minutes.</p>	76521-730 <b>BIOC</b>	76521-732 <b>BIOC</b>	
<p><b>Microplate Swinging-Bucket Package</b></p> <p>Includes: Instrument and VS 4.750-96 swinging-bucket rotor.</p> <p>Ideal for high-throughput microplate applications, enabling speedy preparation of your samples for downstream applications including UV-VIS absorbance, fluorescence, luminescence, PCR and real-time PCR.</p>	76521-734	76521-704	
<p><b>Deep Well Plate Swinging-Bucket Package</b></p> <p>Includes: Instrument and VS 2.5-96 swinging-bucket rotor with BioSafe bucket covers.</p> <p>Ideal for high-throughput and high g-force microplate applications, as well as recovering protein precipitates, soluble proteins and elements in supernatant released from cells or tissues cultured in plates. Our Deep Well Package supports laboratory safety with the option to use BioSafe bucket covers. Each cover seals with an O-ring and is autoclavable up to 121° C for 20 minutes.</p>	76521-706 <b>BIOC</b>	76521-708 <b>BIOC</b>	
<p><b>Fixed-Angle Rotor Package</b></p> <p>Includes: Instrument and VFC 8.50 rotor.</p> <p>High-speed rotor that can spin 8 x 50 mL conical tubes for a variety of applications. Adapters allow for the spinning of 50 mL round-bottom tubes, 25-30 mL skirted tubes and 15 mL conical tubes.</p> <p>BioSafe lid minimizes contamination from broken or leaking tubes and helps ensure laboratory safety.</p>	76521-722 <b>BIOC</b>	76521-724 <b>BIOC</b>	

<sup>1</sup> General Use. Not intended or validated for use in the diagnosis of disease or other conditions.

<sup>2</sup> In Vitro Diagnostics Use.

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# Avanti J-15 Centrifuge Series

From general cell culture preparations to purified end project applications

The Avanti J-15 series is part of a new family of life science equipment that provides the exceptional performance you expect from Beckman Coulter Life Sciences.

## Enhanced control of sample, time and workflow

The Ultra Harmonic Technology optimizes sample separation by reducing the net changes of forces to the sample, maximizing the amount of specimen presence in the pellet, and reducing the presence of contaminants or unpelleted materials in the supernatant.

## KEY ADVANTAGES

- ➔ Increase Pellet Yield by 12.4%\*
- ➔ Decrease Spin Time by 10%\*\*
- ➔ Detect Imbalance in less than 30 seconds

It also optimizes time by implementing faster acceleration and deceleration profiles without compromising on sample quality.

### Speed Efficiency and Minimum Sample Disturbances with Ultra Harmonic Technology

Intelligent acceleration and deceleration profiles

### ULTRA Harmonic Technology

### Durable and Easy-to-Clean, Innovative Design

A hallmark of Beckman Coulter life science equipment

### Fast and Accurate Imbalance Detection

Early diagnostic eliminates false positives with hardware and software improvements

### Efficiency

Easy one-touch access to 6 programs and store up to 99 programs

### Optimize Bench Space

With our truly ventilated unit while processing protocols in blood separation or microbiology

### Ease of Use and Faster Accessibility

Icon usability and intuitive display on high contrast color LCD screen



\* Avanti J-15R versus Allegra X-14R

\*\* Compared to the Allegra X-14R, the Avanti J-15R completes a 10 cycle experiment 12 minutes faster. Overall there is an improvement in time efficiencies over 10%.

# AVANTI J-15 MODELS AND SPECIFICATIONS



US VWR NUMBER	Centrifuge Model
IVD	
76102-920	AVANTI J-15 100-120 VAC, 50/60Hz
76102-924	AVANTI J-15R 120 VAC, 60Hz
76332-090	AVANTI J-15R 208-230 VAC, 60Hz
General Purpose	
76102-922	AVANTI J-15 100-120 VAC, 50/60Hz
76102-904	AVANTI J-15R 120 VAC, 60Hz
76332-088	AVANTI J-15R 208-230 VAC, 60Hz

	DESCRIPTION	AVANTI J-15	AVANTI J-15R
Speed	Set Speed	200 to 10,200 RPM in 10 RPM increments	200 to 10,200 RPM in 10 RPM increments
	Set RCF	10 to 11,420 x g in 10 x g increments	10 to 11,420 x g in 10 x g increments
	Speed Display	Actual rotor speed in 10 RPM increments or actual RCF in 10 x g increments	
	Speed Accuracy	±25 RPM of Set Speed from 200 to 10,200 RPM	
Time	Set Time	1 minute to 99 hours and 59 minutes or continuous (Hold)	
	Time Display	Timed run: indicates run time remaining (HH:MM:SS) Hold run: indicates elapsed time (HH:MM:SS) Pulse run: indicates elapsed time (HH:MM:SS)	
Temperature	Set Temperature <sup>1</sup>	N/A	-10 to +40° C in 1° C increments
	Temperature Display		Chamber temperature in 1° C increments
	Temperature Accuracy		±2° C of Chamber temperature (after equilibration); applies to 4° to 25°C temp range
	Over Temperature Shutdown <sup>2</sup>		> 55° C
Acceleration	Acceleration Profiles	10 acceleration rates, including maximum torque	
Deceleration	Deceleration Profiles	11 deceleration rates, including maximum torque and no braking	
Dimensions	Width	55.6 cm (21.9 in)	75.6 cm (29.8 in)
	Depth	74.9 cm (29.5 in)	70.3 cm (27.7 in)
	Height	36.8 cm (14.5 in)	36.8 cm (14.5 in)
Weight	Weight, not including rotor	93 kg (205 lbs)	120 kg (265 lbs)
Ventilation Clearances <sup>4</sup>	Sides	30 cm (12.0 in)	7.6 cm (3.0 in)
	Rear	30 cm (12.0 in)	7.6 cm (3.0 in)
Finishes	Top Surface	Painted steel	
	Front Surface	Uncoated plastic	
	Door	Painted aluminum and plastic	
Electrical	Electrical Requirements	100V, 12A, 50/60Hz 120V, 10A, 50/60Hz	120V, 12A, 60Hz
		200-230V, 6A, 50/60Hz	200-230V, 8A, 50Hz 208-230V, 9A, 60Hz
	Electrical Supply	Class 1	
	Installation (overvoltage) Category	II	
Environmental	Noise output (1 m in front of instrument, 1.5 m above the floor with JA-10.100 rotor at 10,200 RPM)	61 dBA	58 dBA
	Ambient Temperature Range	10 to 31° C	10 to 35° C
	Humidity	80%, noncondensing	80%, noncondensing
	Refrigerant	N/A	R452A
	Maximum Heat Dissipation under steady state conditions	4095 Btu/h (1.2 kW)	120V: 4913 Btu/h (1.44 kW) 200-230V: 6551 Btu/h (1.92 kW)
	Pollution Degree <sup>3</sup>	2	
Technology	Altitude	Up to 2,000 meters	
	Ultra Harmonic Technology	✓	✓

IVD: In Vitro Diagnostics

<sup>1</sup> To reach temperatures above ambient, the centrifuge is dependent on the frictional heat generated inside the chamber during operation. At low run speeds or low ambient temperatures, the centrifuge may not be able to achieve some higher temperatures. At high run speeds or high ambient temperatures, the centrifuge may not be able to achieve some lower temperatures.

<sup>2</sup> If the system reaches this temperature, it will issue a diagnostic and shut down using max brake.

<sup>3</sup> Normally, only nonconductive pollution occurs. Occasionally, however, a temporary conductivity caused by condensation must be expected.

<sup>4</sup> When operating the J-15 Centrifuge, maintain a 30 cm (12 in.) clearance envelope around the centrifuge under the following circumstances:

- 1) Run duration exceeds 60 minutes or
- 2) Ambient temperature exceeds 25°C.

## AVANTI J-15 APPLICATION PACKAGES

Avanti J-15 Application Package Description	US VWR NUMBER (Ventilated) 100-120V, 50/60HZ	US VWR NUMBER (Refrigerated) 120V, 60HZ	
<p><b>Cell Culture Application Package</b></p> <p>Includes benchtop centrifuge and JS-4.750 (4 x 750 mL) swinging-bucket rotor, 15 mL conical tube adapters (qty 4) and 50 mL conical tube adapters (qty 4).<sup>§</sup></p>	<b>BKC19417</b> (IVD centrifuge)*	<b>BKC19416</b> (IVD centrifuge)*	 <ul style="list-style-type: none"> <li>• 4,750 RPM/5,250 x g (J-15R 200-230V)</li> <li>• 4,550 RPM/4,820 x g (J-15/R 120V)</li> <li>• <b>Adapters:</b> <ul style="list-style-type: none"> <li>• Holds 56 of 15 mL tubes</li> <li>• Holds 28 of 50 mL Tubes</li> </ul> </li> </ul>
<p><b>Blood Sample Packages</b></p> <p>Includes benchtop centrifuge and JS-4.750 (4 x 750 mL) swinging-bucket rotor, 13 mm diameter tube adapters (qty 4) and 16 mm diameter tube adapters (qty 4).<sup>§</sup></p>	<b>BKC19423</b> (IVD ventilated centrifuge)*	<b>BKC19422</b> (IVD refrigerated centrifuge)*	 <ul style="list-style-type: none"> <li>• Holds 120 - 13mm Blood Tubes</li> <li>• Holds 76 - 16mm Blood Tubes</li> </ul>
<p><b>BioSafe Aerosolve Packages</b></p> <p>Includes benchtop centrifuge and BioCertified** JS-4.750 (4 x 750 mL) swinging-bucket rotor, BioCertified** aerosolve canisters (qty 4), 15 mL conical BioSafe aerosolve canister tube racks (qty 4) and 50 mL conical BioSafe aerosolve canister tube racks (qty 4). (Rotor is BioCertified** when used with aerosolve canisters.)</p>	<b>BKC19411</b> (IVD ventilated)*	<b>BKC19410</b> (IVD refrigerated)*	 <ul style="list-style-type: none"> <li>• 4,750 RPM/5,250 x g RCF (J-15R 200-230V)</li> <li>• 4,550 RPM/4820 x g (J-15/R 120V)</li> </ul>
<p><b>Microplate Application Package</b></p> <p>Includes Avanti J-15 benchtop centrifuge and JS-4.750μ microplate rotor (yoke with microplate carriers), 4 microplate carriers</p>	<b>BKC19405</b> (IVD ventilated)*	<b>BKC19404</b> (IVD refrigerated)*	 <ul style="list-style-type: none"> <li>• 4,450RPM/4,060 x g (J-15R)</li> <li>• 4,350RPM/3,880 x g (J-15)</li> </ul>
<p><b>Fixed-Angle Rotor Package</b></p> <p>Includes benchtop centrifuge and BioCertified** JA-10.100 (6 x 100 mL) fixed-angle rotor.</p>	<b>BKC19393</b> (IVD ventilated)*	<b>BKC19392</b> (IVD refrigerated)*	 <ul style="list-style-type: none"> <li>• 600 mL Maximum Capacity</li> <li>• 10,200 RPM 11,420 x g Biosafety Lid</li> </ul>

<sup>§</sup> Bucket covers and tubes/bottles are NOT included and can be ordered separately

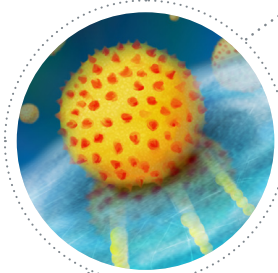
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The Avanti J-15 is an all around solution for everyday scientific needs.

### Transfection/Transduction

Centrifugal boosts, or spinfection, increases transduction and transfection rate up to 10 fold<sup>§</sup>



### Tissue Culture

Routine cell culture procedures are made easy and safe with the use of aerosolve canister. The BioCertified\* enhancement is made of a clear shell to allow sample visibility even before the canister is opened.



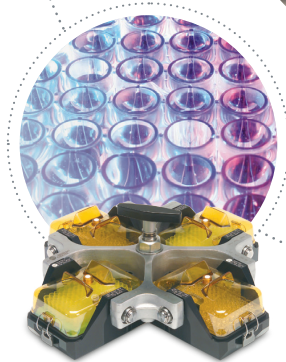
### Nucleic Acid Purification

Achieve high quality plasmid DNA purification using low speed centrifugation and swinging-bucket



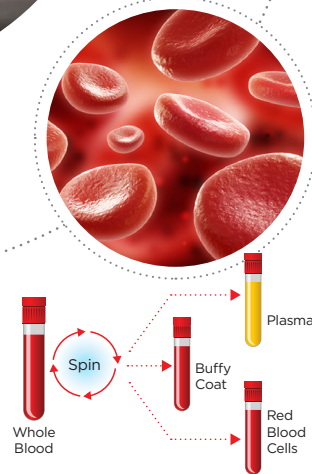
### Assay Setup

The microplate carriers add the versatility to perform assays or grow cells in a plate format



### Blood Component Separation

Optimize blood sample separations with new technology that avoids sample interface disturbances<sup>‡</sup> or grow cells in a plate format



<sup>§</sup> Berggren, W. Travis, Margaret Lutz, and Veronica Modesto. General spinfection protocol. StemBook (2012).

<sup>‡</sup> Fuss, Ivan J., et al. Isolation of whole mononuclear cells from peripheral blood and cord blood. John Wiley & Sons, Inc., 2009.

\* BioCertified has been tested and validated to demonstrate containment of microbial aerosols by an independent third-party facility (Health Protection Agency, Porton Down, UK or USAMRIID, Ft. Detrick, MD, USA).

## AVANTI J-15 MULTI-DIMENSIONAL DIFFERENTIATION & FEATURES



### Early Imbalance Detection Within 30 seconds

#### Increases confidence on experimental runs

We've optimized our sensitivity to detect rotor imbalance as close to the beginning of the run as possible. That means the user can set the experiment and walk away with confidence. This saves time and protects the sample.



### True Imbalance Detection

#### Reduces false diagnostics

Our improved hardware and software accurately respond to true imbalance without triggering nuisance imbalance diagnostics. This feature reduces the hassle and downtime during the workflow. System allows up to 12 gram imbalance tolerance\*.



### Lower Lift Over Height

#### Easy rotor swapping

Designed with the end-user in mind, the J-15 has a 13% lower lift over height when compared to the Allegra X-series centrifuges. This allows for easier rotor swapping for all user types.

## AVANTI J-15 SWINGING-BUCKET ROTORS



### JS-4.750

US VWR NUMBER 76102-916

- Max RPM: 4,750 RPM
- Max RCF: 5,250 x g
- 3 liter Maximum Capacity
- BioSafe options
- Sample containers supported
  - Flasks
  - Tube range: 3 - 50 mL
  - Bottles: 230 conical, 250, 500, 750 mL
  - Aerosolve Canisters
- Includes rotor and 4 aluminum buckets



### JS-4.750µ

US VWR NUMBER 76102-918

- Max RPM: 4,450 RPM
- Max RCF: 4,060 x g
- BioSafe options
- Plate Capacity
  - 16 single plates
  - 4 deep well
- Includes rotor and 4 aluminum microplate carriers (buckets not included)

## AVANTI J-15 FIXED-ANGLE ROTOR



### JA-10.100

US VWR NUMBER 76102-914

- Max RPM: 10,200 RPM
- Max RCF: 11,420 x g
- 600 mL Maximum Capacity
- BioSafe Certification
- Sample containers supported
  - 1.5, 10, 15, 50, 100 mL tubes

\* Using the JS-4.750 rotor

**BIOC** BioCertified is a term used to describe our products which have been tested and validated to demonstrate containment of microbiological aerosols by an independent, third-party facility. Improper use or maintenance may affect seal integrity and, thus, containment.

## AVANTI J-15 SWINGING-BUCKET ROTOR ACCESSORIES

Swinging-bucket rotor accessories can be used in the following rotors:  
JS-4.750 , GH-3.8,  
SX4750, SX4750A\*



### Additional Biosafety accessories for personal protection and sample protection

US VWR NUMBER	Description
BK392805	JS-4.750 Tube-Bottle Bucket Covers (set of 2)
BK393070	JS-4.750 Multi-well Plate Carrier Cover (set of 2)
BK392806	JS-4.750 Multi-well Plate Carrier (set of 2)
BK359481	JS-4.750 Aerosolve Canister (Set of 2)



US VWR NUMBER  
BK392805 SX4570 Rotor

*Tubes and covers  
not included*

### Modular Disk Adapters for round-bottom tubes (polypropylene)

ADAPTER US VWR NUMBER		Nom. Tube Vol. (ml)	Nom. Tube Dia. (mm)	Max. No. of Tubes per Adapter	Max. No. Tubes in Rotor	Color Code
Set of 2	Set of 4					
BK359469	BK359148	3 5	10 12	37	148	blue
BK359478	BK359157	3 & 5	13	30	120	tan
BK359470	BK359149	7 & 10	14	24	96	orange
BK359471	BK359150	12	16	19	76	purple
BK359472	BK359151	15	18	14	56	green conical
BK359473	BK359152	15 & 20	18	14	56	green
BK359475	BK359154	30 & 50	30	4	16	lt. green conical
BK359474	BK359153	50	29	7	28	yellow
BK359476	BK359155	50	35	4	16	dk. blue
BK359477	BK359156	100	44	2	8	brown



US VWR NUMBER  
BK392806 Microplate Carrier Assembly Adapter (set of 2)

US VWR NUMBER  
BK393070 BioCertified\*\* Microplate Covers (set of 2)

*Microplate not included*



BK359481

\* Always check the rotor manual for the list of compatible accessories, tubes and adapters.

\*\* BioCertified has been tested and validated to demonstrate containment of microbial aerosols by an independent third-party facility (Health Protection Agency, Porton Down, UK or USAMRIID, Ft. Detrick, MD, USA).

## Conical-Bottom Tubes

US VWR NUMBER (Qty 2)	US VWR NUMBER (Qty 4)	Volume, mL	Diameter, mm	Capacity	Color
BK359472	BK359151	15	18	14 Tubes	Green
BK393266	BK393267	50	30	7 Tubes	Grey
BK359475	BK359154	50	30	4 Tubes	Lt. Green
ACCESSORIES					
	BK354511**	1.5	Adapter Plate	26 Microtubes	Blue
	BK343108**	--	Tube Decanter for 12 mm Modular Adapter	--	--
US VWR NUMBER		Volume, mL	SIZE, mm	Capacity	Color
BOTTLE ADAPTERS (PK OF 1)					
	BK356983* (Set of 4)	230 (Conical)	62	1 Bottle	Orange Cushion
	BK349849	250 (Conical)	62	1 Bottle	Red
	BK349946	250 (Flat Bottom)	62	1 Bottle	Yellow
	BK349945	500 (Flat Bottom)	70	1 Bottle	Lt. Purple
	BK349846	750 (Flat Bottom)	96	1 Bottle	Blue



## Cell Culture Flask Adapters

US VWR NUMBER	Description	Color	Pack Of	Max Speed (RPM)	Max RCF g
BK369292	Corning*+ T-75 cm <sup>2</sup> Canted Neck Cell Culture flasks Adapters	Orange	2	3,024 at 50 mL	2,000 at 50 mL
BK369295	Corning*+ T-25 cm <sup>2</sup> Canted Neck Cell Culture flasks Adapters	Green	2	3,200 at 25 mL	2,000 at 25 mL



The cell culture flask adapters are single-piece elastomeric (EPDM) adapters designed to allow centrifugation of T-75 (75 cm<sup>2</sup> area) or T-25 (25 cm<sup>2</sup> area) cell culture flasks. The adapters stand up to the rigors of use: centrifugal force, cleaning and sterilization.

## BioCertified Aerosolve Canisters\*

US VWR NUMBER	Description	Pack Of
CANISTERS		
BK359232 	Aerosolve Canister	4
BK359481 	Aerosolve Canister	2
REPLACEMENT PARTS		
BK345366	Replacement O-Ring for Aerosolve Canisters	1
BK361269:	Pad	1




To help minimize contamination from broken or leaking tubes. Clear plastic allows for viewing from top to bottom. Each canister seals with an O-ring and is autoclavable up to 121°C.

**Ordering Information:** Each Aerosolve canister is supplied with base, cap, O-ring and pad (also available separately). Tube racks sold separately.

\* use with BK349946 for Beckman Coulter 230 mL conical bottles only

\*\* fits over 12 mm blue adapters BK359148 and BK359469

† All other trademarks are the property of their respective owners.

 BioCertified is a term used to describe our products which have been tested and validated to demonstrate containment of microbiological aerosols by an independent, third-party facility. Improper use or maintenance may affect seal integrity and, thus, containment.



## Aerosolve Canister Tube Racks (must be used in Aerosolve Canisters)

US VWR NUMBER (Qty 2)	US VWR NUMBER (Qty 4)	Tube Volume, mL	Tube Diameter, mm	Capacity	Adapter Color
<b>FOR ROUND-BOTTOM TUBES</b>					
BK359482	BK359160	3 & 5	12	24 Tubes	Blue
BK359489	BK358993	5	13	24 Tubes	Tan
BK359483	BK359161	10	14	18 Tubes	Orange
BK359484	BK359162	12	16	12 Tubes	Purple
BK359485	BK359163	15 & 20	18	12 Tubes	Green
BK359486	BK359164	50	29	4 Tubes	Yellow
<b>FOR CONICAL-BOTTOM TUBES</b>					
BK354495	--	1.5	11	24 Tubes	White
BK359487	BK358991	15	17	6 Tubes	Lt. Green
BK359488	BK358992	50	30	4 Tubes	Lime Green
--	BK356985	230	62	1 Bottle	Orange



Molded plastic racks support tubes in Aerosolve canisters (BK359232). Open-rack design permits quick inspection for possible broken or leaking tubes.

## AVANTI J-15 FIXED-ANGLE ROTOR ACCESSORIES

### Bottle and Tube Adapters for the JA-10.100 Rotor<sup>a</sup>

ADAPTER US VWR NUMBER (Set of 6)	Tube or Bottle Type <sup>b</sup>	Tube Dimensions (mm)	Nominal Tube Volume (ml)
BK392830	round-bottom tube or bottle	29 x 108	50
BK392268	conical tube	30 x 115	50
BK392823	bottle	18 x 107	15
BK-392270	conical tube	17 x 120	15
BK392824	round-bottom bottle	16 x 82	10
BK344497 <sup>c</sup>	microfuge tube	11 x 39	1.5

a. Unless otherwise indicated, adapters are polypropylene.

b. Observe manufacturer's recommendations for RCF and temperature limitations.

c. BK344497 fits in BK392830.

## COMPLIANCE AND TECHNICAL SUPPORT

- At Beckman Coulter Life Sciences, engineering, sales, support, training and service work together to offer comprehensive and extensive customer focused products.
- Expert service engineering team strives to "Fix It Right the First Time."
- Certifications of Compliance are available upon request.

# Allegra X-30 Centrifuge Series



Excellent performance and versatility in a small footprint

- Offers the highest speed and *g*-force in its class\*
  - 29,756 x *g* (18,000 RPM) maximum in fixed-angle rotor (refrigerated model)
  - 4,255 x *g* (4,700 RPM) maximum in 4x400 mL swinging- bucket rotor (refrigerated model)
- Space-saving footprint — only 18.1" wide
- BioCertified<sup>††</sup> swinging-bucket and fixed-angle rotors enhance safety for lab personnel
- Accepts samples from 0.25 mL to 400 mL
- Capacity up to 1.6 liters
- Offered in ambient and refrigerated models
- Four application packages available for streamlined centrifuge solutions

The Allegra X-30 (ambient) and Allegra X-30R (refrigerated) benchtop centrifuges offer high-performance and versatility in a compact design. Multiple rotor and adapter options are offered to support a wide variety of applications. Both accommodate samples from 0.25 mL up to 400 mL tubes/bottles (depending on the rotor), and standard 96-well microplates and deep-well plates.

Each features a brushless induction drive motor, which provides quiet, maintenance-free operation. Digital display indicates actual speed, set speed, temperature (on refrigerated model) and rotor imbalance. The Allegra X-30 Series also features 10 different acceleration and deceleration rates.

An automatic sensor blocks centrifuge operation until the door is locked. Once in operation, the sensor releases the door lock only when the rotor has stopped. Refrigerated model features CFC-free refrigerant. Set temperature is maintained when centrifuge is at rest.

\* When compared to similar models. Allegra X-30R achieves maximum speed with rotor F2402H.

## KEY ADVANTAGES

- ➔ Versatile table top centrifuge capable of reaching a maximum RCF of 29,756 x *g*
- ➔ 13 rotor options
- ➔ Compact (18.1" width)
- ➔ Capacity 1.6 liters

## ALLEGRA X-30 PACKAGES

Convenient application packages for quick start-up and bundled savings. Contact your VWR Sales Representative for more information.

### All IVD Models

Application Package Description	US VWR NUMBER (Ambient)	US VWR NUMBER (Refrigerated)
<b>Cell Culture Application Package</b> Includes instrument, SX4400 Swinging-bucket Rotor, 15 mL Conical Adapters (2 sets of 2), 50 mL Conical Adapters (2 sets of 2) <i>Tubes sold separately</i>	<b>BKB08536</b>  <b>BKB08705 (High-Capacity)</b>	<b>BKB08540</b>  <b>BKB08708 (High-Capacity)</b>
<b>Microplate Application Package</b> Includes instrument, S6096 Microplate Rotor (Holds 6 standard or 2 deep-well plates). <i>Microplates sold separately</i>	<b>BKB08538</b>	<b>BKB08542</b>
<b>Molecular Performance Application Package</b> Includes instrument, F2402H Fixed-angle Rotor <i>Tubes sold separately</i>	<b>BKB08545</b>	<b>BKB08547</b>
<b>Clinical Applications Package</b> Includes instrument, SX4400 Swinging-bucket Rotor, Vacutainer/RIA Adapters/Hemolyse for 10 mL, 16 mm Tubes (2 sets of 2), Vacutainer/Hemolyse/RIA Adapters for 5 mL, 13 mm Tubes (2 sets of 2) <i>Tubes sold separately</i>	<b>BKB05796</b>	<b>BKB05802</b>

## ALLEGRA X-30 MODELS & SPECIFICATIONS



**Ordering Information:** Rotors and accessories are sold separately. Additional adapters are available.

US VWR NUMBER	Description
BKB06314	Allegra X-30, Ambient Model, IVD, 120 V, 60 Hz
BKB06320	Allegra X-30R, Refrigerated Model, IVD, 120 V, 60 Hz

	ALLEGRA X-30	ALLEGRA X-30R
<b>Max. Speed</b>	23,511 x g/16,000 RPM	29,756 x g/18,000 RPM
<b>Max. Capacity</b>	4 x 400 mL	4 x 400 mL
<b>Set Temp. Range</b>	N/A	-20°C to +40°C
<b>Operating Temp.</b>	Ambient	+2°C to +40°C
<b>Drive</b>	Brushless induction	Brushless induction
<b>Accel/Decel Rates</b>	10/10	10/10
<b>Run Time</b>	Up to 9 hrs., 59 min., hold; pulse (short run)	Up to 9 hrs., 59 min., hold; pulse (short run)
<b>Refrigeration</b>	No	Yes, CFC-Free
<b>Dim. with lid closed</b>	46w x 55d x 35.5h cm (18.1 x 21.7 x 14 in)	46w x 70.7d x 37h cm (18.1 x 27.8 x 14.6 in)
<b>Weight without Rotor</b>	48 kg (106 lbs.)	78 kg (172 lbs.)
<b>Electrical</b>	120 V, 60 Hz	120 V, 60 Hz

## ALLEGRA X-30 SWINGING-BUCKET ROTORS & ADAPTERS

These rugged rotors are constructed from heavy-duty aluminum and are engineered to provide quiet, dependable service. They accommodate tubes and bottles from 0.25 mL to 400 mL or up to 6 microplates. Rotors can be autoclaved or chemically sterilized.

**Ordering Information:** Rotors are supplied complete, ready to use. Bottles, wrenches and accessory parts are available separately.

### 4 x 400 mL BioCertified<sup>††</sup> Swinging-bucket Rotor (SX4400)

- Spins from 64 x 1.5 mL tubes up to 4 x 400 mL bottles

US VWR NUMBER	Description	Allegra X-30 Max RPM/RCF, x g	Allegra X-30R Max RPM/RCF, x g
BKB01425 <sup>†</sup> 	Model SX4400 BioCertified <sup>†</sup> Swinging-bucket Rotor 4 x 400 mL Buckets	4,200/3,398	4,700/4,255
BK392266	Bucket Covers for SX4400 Rotor (set of 4)	--	--
BKB01435	400 mL Polypropylene bottle, 85 x 118 mm, each	--	--



Tubes Not Included

### 4 x 250 mL Swinging-bucket Rotor (SX4250)

- Spin from 64 x 1.5 mL tubes up to 4 x 250 mL bottles

US VWR NUMBER	Description	Allegra X-30 Max RPM/RCF, x g	Allegra X-30R Max RPM/RCF, x g
BK392243	Model SX4250 Swinging-bucket Rotor 4 x 250 mL Buckets	4,200/3,398	4,500/3,901
BK392266	Bucket Covers for SX4250 and SX4400 Rotors (Set of 4)	--	--



Tubes Not Included

<sup>†</sup> Rotor is BioCertified when used in conjunction with bucket covers.

<sup>††</sup> BioCertified is a term used to describe our products which have been tested and validated to demonstrate containment of microbiological aerosols by an independent, third-party facility. Improper use or maintenance may affect seal integrity and, thus, containment.



## Adapters for the 4 x 400 mL and 4 x 250 mL Swinging-bucket Rotors

For use with the BKB01425 and BK392243 Swinging-bucket rotors for the Allegra X-30 ambient and Allegra X-30R refrigerated units. These molded plastic adapters help maximize the efficiency of runs by providing proper support for specified tube sizes.

Each adapter also functions as a convenient free-standing rack for quick loading and unloading. Adapters can be autoclaved.

US VWR NUMBER	TUBE VOL.	TUBE SIZE (MM)	BUCKET/ ROTOR CAPACITY	PACK OF
BK392256	250 mL (Flat)	61.8 x 125	1/4	2
BK368457	180 mL	56.5 x 113	1/4	2
BK368458	125 mL	50.5 x 99	1/4	2
BK368459	80/100 mL (Glass)	44 x 100	1/4	2
BK392261	85 mL (Oak Ridge)/ 94 mL	38 x 112	1/4	2
BK368477	50 mL (Oak Ridge)	28.5 x 107	4/16	2
BK392265	50 mL (Glass)	34 x 100	3/12	2
BK392258	50 mL (Conical)	28.5 x 100	3/12	2
BK368461 <sup>◇</sup>	50 mL (Conical)	30 x 120	4/16	2
BK368462	30 mL (w/Screw Cap)	26 x 100	5/20	2
BK368463	25 mL (Glass)	24 x 100	5/20	2
BK392257	15 mL (Conical)	17 x 120	5/20	2
BK368464 <sup>◇</sup>	15 mL (Conical)	17 x 120	9/36	2
BK368468	10 mL (Oak Ridge)	16.1 x 81.1	12/48	2
BK368465	10/15 mL (Round)	17 x 110	12/48	2
BK368467	5 mL (Round)	13 x 75	16/64	2
10252-968	RIA Tubes	12 x 75	25/100	2
BK368469	7 mL (Glass)	12 x 100	16/64	2
BK368470	1.5/2.2 mL	11 x 38	16/64	2
BK368471	0.5 mL (PCR)	7 x 19	24/96	2

<sup>◇</sup> Adapter cannot be used with bucket covers.

## Microplate Rotor (S6096)

- Spins 2 x 3 microplates or 2 x 1 deep-well plates



Microplates Not Included

US VWR NUMBER	DESCRIPTION	ALLEGRA X-30 MAX RPM/RCF, x g	ALLEGRA X-30R MAX RPM/RCF, x g
BKB01430	Model S6096, Microplate Rotor 2 to 6 Plates	4,700/2,721	4,700/2,721

## Microplate Rotor (S2096)

- Spins 2 x 3 microplates or 2 x 1 deep-well plates



Microplates Not Included

US VWR NUMBER	DESCRIPTION	ALLEGRA X-30 MAX RPM/RCF, x g	ALLEGRA X-30R MAX RPM/RCF, x g
BK361111	Model S2096, Microplate Rotor 2 to 6 Plates	3,000/1,107	3,000/1,107

## 96 Deep- and Square-well Polypropylene Titer Plates

US VWR NUMBER	STERILE	WELL SHAPE	WELL VOL.	PACKAGING
BK267006	No	Round	1 mL	24/Case
BK267007	Yes	Round	1 mL	24/Case

Note: Rotors and adapters are also compatible with the Allegra X-22 / X-22R instruments, except SX4400 and S6096 rotors.

## 24 x 1.5 mL/2.0 mL Swinging-bucket Rotor (SX241.5)

- Provides flat pelletization for DNA precipitations and immunoprecipitations












US VWR NUMBER	DESCRIPTION	ALLEGRA X-30 MAX RPM/RCF, x g	ALLEGRA X-30R MAX RPM/RCF, x g
BK392271	Model SX241.5, Swinging-bucket Rotor 24 x 1.5 mL/2.0 mL Microcentrifuge Tubes	12,500/ 12,950	14,000/ 16,244

# ALLEGRA X-30 FIXED-ANGLE ROTORS & ADAPTERS

## Fixed-Angle Rotors

- Spins 250 µL (with adapter) to 85 mL tubes up to 22,065 x g (15,500 RPM)



US VWR NUMBER	DESCRIPTION	ALLEGRA X-30 MAX RPM/ RCF, x g	ALLEGRA X-30R MAX RPM/ RCF, x g
BK361171 	<b>F2402H</b> - Fixed-angle Rotor 24 x 1.5/ 2.0 mL Tubes 	16,000/ 23,511	18,000/ 29,756
BK392274	<b>FX-301.5</b> - Fixed-angle Rotor 30 x 1.5/ 2.0 mL Tubes 	13,200/ 19,515	16,000/ 28,672
BK361221	<b>F1010</b> - Fixed-angle Rotor 10 x 10 mL Tubes 	16,000/ 21,791	18,000/ 27,579
BK361231	<b>F0630</b> - Fixed-angle Rotor 6 x 30 mL Tubes 	16,000/ 22,364	18,000/ 28,305
BK364640	<b>F0850</b> - Fixed-angle Rotor 8 x 50 mL Tubes 	9,000/ 8,528	11,400/ 13,682
BK364650	<b>F0685</b> - Fixed-angle Rotor 6 x 85 mL Tubes 	8,000/ 6,953	10,000/ 10,864
BK364680	<b>C1015</b> - Conical Fixed-angle Rotor 	9,000/ 8,437	10,000/ 10,416
BK364670	<b>C0650</b> - Conical Fixed-angle Rotor 6 x 50 mL Conical Tubes 	9,000/ 8,346	10,000/ 10,304

## Adapters for FX-301.5, F2402H, SX241.5 Rotors

US VWR NUMBER	TUBE VOL.	TUBE SIZE (MM)	ROTOR CAPACITY	PACK OF
BK361247	0.25 mL/ 0.40 mL	5 x 45/7 x 40	30	24
BK364690	0.50 mL/ 0.75 mL	18 x 28	30	12
BK364701*	1.5 mL/ 2.2 mL	11 x 38	4/30	12

\* For runs at 20,000 x g and greater

## Adapter for F0685 Rotor

US VWR NUMBER	TUBE VOL.	TUBE SIZE (MM)	ROTOR CAPACITY	PACK OF
BK392617	15 mL (Round)	18 x 106	6	6
BK347539	50 mL (Round)	29 x 104	6	1
BK-392270**	15 mL (Conical)	17 x 100	6	6
BK392268**	50 mL (Conical)	28.5 x 120	6	6

\*\* Without rotor lid.

## Adapter for C0650 Rotor

US VWR NUMBER	TUBE VOL.	TUBE SIZE (MM)	ROTOR CAPACITY	PACK OF
BK393088	15 mL (Conical)	17 x 120	6	1

## Adapter for F0850 Rotor

US VWR NUMBER	TUBE VOL.	TUBE SIZE (MM)	ROTOR CAPACITY	PACK OF
BK870329	15 mL	17 x 120	8	1

## Rubber Pad for F1010 Rotor

US VWR NUMBER	TUBE VOL.	TUBE SIZE (MM)	BUCKET/ ROTOR CAPACITY	PACK OF
10769-308	6.5 mL	Rubber Pad for Tube Removal	10	24

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## Allegra 64R High-speed Centrifuge



*Optimal for Subcellular Fractionation, Proteins and Viruses*

This brushless, induction drive refrigerated centrifuge brings high g-force (64,400  $\times$  g) to the lab bench. Ideal for high-speed separations, including subcellular fractionation, protein isolation and purification, viruses and phase extractions.

Easy-to-use control panel displays actual speed (RCF or RPM) or time, temperature and acceleration/deceleration rates. It can be customized for routine runs with up to 10 different acceleration/deceleration profiles. Safety features include a door interlock that prevents contact with spinning rotor and over-temperature/over-speed diagnostics that protect samples.

The quiet (65 dBA), brushless induction drive motor can be set in 100 RPM increments and is accurate to  $\pm 50$  RPM. A flexible drive shaft helps compensate for drive imbalances. Accommodates a selection of 13 rotors, sold separately. The BioSafe+ fixed-horizontal rotor contains hazardous spills and aerosols if breakage occurs. It accommodates from 84  $\times$  250  $\mu$ L to 60  $\times$  1.8 mL microcentrifuge tubes and can be carried from the centrifuge to a fume hood without breaking the seal.

### KEY ADVANTAGES

- 64,400  $\times$  g (30,000 RPM) with fixed-angle rotor
- Spin tubes from 0.25 up to 85 mL
- Operating temperature from +2° C to +40° C
- Rotors marked **BIOC** are certified for biocontainment††
- Compact, quiet and easy-to-use

### ALLEGRA 64R MODEL

**Ordering Information:** Supplied with a one-year parts and labor warranty. Rotors and accessories are sold separately. Additional adapters are available. For more information, contact 1-800-932-5000.

US VWR NUMBER	DESCRIPTION
BK367586	Allegra 64R High-speed Benchtop Centrifuge, Refrigerated, 208 V, 60 Hz

### ALLEGRA 64R SPECIFICATIONS



ALLEGRA 64R	
Max. Speed	64,400 $\times$ g/30,000 RPM
Run Time	9 hrs., 59 min. Hold, pulse (short run)
Max. Capacity	6 $\times$ 85 mL
Dim. w/lid closed	61w $\times$ 66d $\times$ 38h cm (24 $\times$ 26 $\times$ 15 in)
Set Temperature Range	-20 to 40°C
Weight without Rotor	102.1 kg (225 lbs.)
Operating Temperature	+2 to +40°C
Electrical	208 V, 60 Hz, 12 A
Drive	Brushless induction
Accel/Decel	10/10

## ALLEGRA 64R ROTORS

These rugged rotors are constructed from heavy-duty aluminum and are engineered to provide quiet, dependable service. Rotors can be autoclaved or chemically sterilized.



### Swinging-bucket Rotor (SO410)

- 4 x 10 mL tubes
- Up to 10,730 x g (10,000 RPM)

### Fixed-angle Rotors

- Spin: 250 µL (with adapter) to 85 mL tubes
- Up to 64,400 x g (30,000 RPM)

US VWR NUMBER	DESCRIPTION	MAX RPM/RCF, x g	MAX. RPM/RCF, x g AT 4°C
<b>BK364630*</b>	F1202 - 45° Fixed-angle Rotor, 12 x 1.5/2.0 mL Microcentrifuge Tubes	30,000/ 64,400	28,500/ 58,120
<b>BK361171*</b> <small>BioC</small>	F2402H - 45° Fixed-angle Rotor, 24 x 1.5 mL/2.0 mL Microcentrifuge	26,000/ 61,970	21,000/ 40,430
<b>BK364600*</b>	F3602 - 45° Fixed-angle Rotor, 36 x 1.5 mL/2.0 mL Microcentrifuge Tubes	22,000/ 47,620	19,500/ 37,410
<b>BK361221</b>	F1010 - 35° Fixed-angle Rotor, 10 x 10 mL Tubes	26,000/ 57,440	22,500/ 43,020
<b>BK361231</b>	F0630 - 30° Fixed-angle Rotor, 6 x 38.5 mL Tubes	26,200/ 59,860	21,500/ 40,310
<b>BK364610</b>	F0650 - 25° Fixed-angle Rotor, 6 x 50 mL Tubes	21,000/ 41,420	18,500/ 32,140
<b>BK364640</b>	F0850 - 25° Fixed-angle Rotor, 8 x 50 mL Tubes	16,500/ 29,220	16,500/ 29,220
<b>BK364620</b>	F0485 - 30° Fixed-angle Rotor, 4 x 85 mL Tubes	20,000/ 40,700	17,500/ 31,160
<b>BK364650</b>	F0685 - 25° Fixed-angle Rotor, 6 x 85 mL Tubes	15,500/ 26,320	15,000/ 24,650
<b>BK364680</b>	C1015 - 25° Fixed-angle Rotor, 10 x 15 mL Conical Tubes	10,000/ 10,400	10,000/ 10,400
<b>BK364670</b>	C0650 - 25° Fixed-angle Rotor, 6 x 50 mL Conical Tubes	10,000/ 10,400	10,000/ 10,400
<b>BK363000**</b> <small>BioC</small>	H6002 - Fixed-horizontal Rotor	12,200/ 12,400	12,200/ 12,400
<b>BK364660</b>	Swinging-bucket Rotor, 4 x 10 mL Tubes	10,000/ 10,730	10,000/ 10,730

\* Can spin 250/400 µL using adapter catalog number BK361247 / For 1.5/1.8 mL tubes at runs greater than 20,000 x g use adapter Cat. No. BK364701

\*\* Works with 1.5/1.8 mL with slide Cat. No. BK345524 and 250/400 µL with slide Cat. No. BK345521

+ BioSafe and BioSafety are terms intended to describe the enhanced biocontainment features of our products.

‡ BioC BioCertified is a term used to describe our products which have been tested and validated to demonstrate containment of microbiological aerosols by an independent, third-party facility. Improper use or maintenance may affect seal integrity and, thus, containment.

## Airfuge Benchtop Ultracentrifuge



### Ultracentrifuge Power for Small Volume Samples

This compact ultracentrifuge is a versatile and convenient benchtop unit. It pellets nearly any material that can be sedimented in a full-size centrifuge or ultracentrifuge.

The Airfuge is air turbine-driven and delivers results in a fraction of the time of larger units. The combination of high g-force and short pathlength results in remarkably short run times to produce results. Run time is shortened even further by rotor acceleration to full speed—110,000 RPM at 199,000 x g—as quickly as 30 seconds. An optional digital speed readout accessory is available for advanced speed readout. Runs can be timed from 0-300 minutes in 5 minute increments; a HOLD button can be used for longer runs.

The speed is air-pressure regulated and braking is achieved by coasting, then friction braking by engagement of brake pin. The rotor operates at a temperature a few degrees above ambient.

### AIRFUGE MODELS

**Ordering Information:** Airfuge air-driven ultracentrifuge includes connecting hose and air filter. Order rotors and accessories separately. For more information, contact 1-800-932-5000. Air source not supplied by Beckman Coulter.

US VWR NUMBER	DESCRIPTION
BK340400	Airfuge Ultracentrifuge, 120 V, 60 Hz

### KEY ADVANTAGES

- Binding studies right on your workbench
- Lipoproteins
- Clarification of lipemic samples
- Proteomics
- Sample preparation for electron microscopy
- Soluble solid/total solids ratios for tomato canning applications

### AIRFUGE SPECIFICATIONS



#### AIRFUGE ULTRACENTRIFUGE

Max. Speed	110,000 ± 5,000 RPM
Max. Force	199,000 x g
Max. Capacity	4 x 450 µL
Drive	Air turbine drive
Air pressure at ultracentrifuge for routine operation	30 psi (210 kPa)
Accel. Time	30-60 seconds
Decel. Time	2.5-5.5 minutes
Speed Control	Air-pressure regulation
Speed Readout	By conversion of air pressure reading from instrument gauge. An optional Digital Speed Readout Accessory (BK347592) is available.
Braking System	Coasting, then frictional braking by engagement of brake pin.
Temperature Range	Rotor temperature is a few degrees above ambient.
Timer	0-300 minutes in five-minute increments, HOLD for longer runs.
Dim	28w x 38d x 20h cm (11 x 15 x 8 in)
Weight	10.4 kg (23 lbs)

**Air and power requirements:** To perform to specifications, an air source with an air flow rate of 3.5 cubic feet per minute (0.0016 m<sup>3</sup>/s) at 42 psi (290 kPa) is required. The unit is equipped with six feet (1.83m) of flexible air hose and attaches to a standard 1/4 in. (6.35 mm) male hose connector. A filter is supplied to avoid contamination by removing oil and water from compressed air. Power requirements are 120 V, 60 Hz, or 220 V, 50 Hz.



## AIRFUGE ROTORS

US VWR NUMBER	DESCRIPTION	MAX RPM	MAX. RCF, x g AT 4°C
<b>BK347596</b>	A-110 Fixed-angle Rotor - 6 x 180µL, 18° Fixed-angle, Aluminum, Anodized Red, Includes 1 Box of BK342630 Polyallomer Tubes	110,000	199,000
<b>BK347594</b>	A-100/30 Fixed-angle Rotor - 6 x 240µL, 30° Fixed-angle, Aluminum, Anodized Blue, Includes 1 Box of BK342630 Polyallomer Tubes	92,000	167,000
<b>BK347593</b>	A-100/18 Fixed-angle Rotor - 6 x 175µL, 18° Fixed-angle, Aluminum, Anodized Silver, Includes 1 Box of BK342630 Polyallomer Tubes	95,000	148,000
<b>BK347595</b>	A-95 Fixed-angle Rotor - 4 x 450µL, 30° Fixed-angle, Aluminum, Anodized Black, Includes Box of BK345843 Ultra-Clear™ Tubes	95,000	178,000
<b>BK347833</b>	Batch Rotor-Min. Fill Vol. 2 mL: Max. Fill Vol. 7 mL, Includes Rotor Stand/Vise and 1 Each BK853156 O-ring, BK343197 Bushing	90,000	132,000
<b>BK347844</b>	Electron Microscopy Rotor (EM-90) - Max. Vol. 6 x 100µL Includes 5mm Core w/600 µL Capacity (100µL Per Cell): 3 mm Core w/360µL Capacity (60µL Per Cell): Rotor Stand/Vise: Gaskets: Sector Core Removal Bolt: Template: 1 Each BK853156 O-ring, BK343197 Bushing	90,000	118,000
<b>BK341260</b>	ACR-90 Chylomicron Rotor for Lipemic Specimens - Yield 2.6 mL. Includes Rotor Stand/Vise, and 1 Package of BK341251 Liners (3.5 mL) and Adapter for BK342634 Liner (2.4 mL)	90,000	122,000





## Accessories for Obsolete Benchtop Centrifuges

### ALLEGRA X-12, X-14 & X-15 ROTORS

#### 4 x 750 mL Rotor (SX4750)


- For use with the Allegra X-12 Series, Allegra X-14 Series and Allegra X-15R centrifuges
- Accepts T-25 cm<sup>2</sup> and T-75 cm<sup>2</sup> cell culture flasks (adapters required)
- Accepts tubes from 1.5 mL to 750 mL
- 3,270 x g (3,750 RPM) - Allegra X-12/X-12R
- 4,303 x g (4,300 RPM) - Allegra X-14/X-14R
- 5,250 x g (4,750 RPM) - Allegra X-15R

Sturdy stainless steel yoke construction with free-swinging aluminum buckets. Individual BioCertified bucket covers minimize contamination from broken or leaking tubes.



*Tubes Not Included*

**Ordering Information:** Rotor supplied with 4 buckets. The rotor bucket covers, sold separately, are supplied with gaskets and cover clips (BK392805).

US VWR NUMBER	DESCRIPTION
BK369702†	4 x 750 mL Swinging-bucket Rotor (SX4750)
BK392805 	BioCertified Bucket Covers (Set of 2)

† Rotor is BioCertified when used in conjunction with bucket covers.

## 6 x 100 mL Rotor (FX6100)

To help further isolate biomolecules; clarify media, cell debris, lysate, tissue homogenate; variety of adapters available for 1.5 mL to 100 mL tubes. For the Allegra X-12 Series, Allegra X-14 Series and Allegra X-15R centrifuges, this 6 x 100 mL fixed-angle rotor (FX6100) has a 25° angle and achieves 11,400 x g (10,200 RPM).



Tubes Not Included

US VWR NUMBER	DESCRIPTION
<b>BK369735</b>	BioCertified 6 x 100 mL Fixed-Angle Rotor (FX6100), 11,400 x g (10,200 RPM) Allegra X-12/X-12R, Allegra X-14 and Allegra X-15R

US VWR NUMBER	TUBE VOLUME, mL	TUBE DIAMETER, mm	CAPACITY	PACK OF
ADAPTERS FOR 6 x 100 mL ROTOR (FX6100)				
<b>BK344497*</b>	1.5/2.0 mL	11	36	Each
<b>BK392824</b>	10 mL (Round)	16	6	6
<b>BK392823</b>	15 mL (Round)	18	6	6
<b>BK-392270</b>	15 mL (Conical)	17	6	6
<b>BK392822</b>	30 mL (Round)	25.7/25	6	6
<b>BK392830</b>	50 mL (Round)	29	6	6
<b>BK392268</b>	50 mL (Conical)	30	6	6

\*Must be inserted into BK392830

US VWR NUMBER	TUBE SIZE (MM)	ROTOR CAPACITY	PACK OF
<b>BK356975</b>	13 x 100	18	Each
<b>BK356969</b>	12 x 75	18	Each

## ARIES 4 x 750 mL Rotor (SX4750A)

**Ordering Information:** Rotor supplied with four buckets. The rotor bucket covers, sold separately, are supplied with gaskets and cover clips. Aerosolve canisters are available for both SX4750 and SX4750A



Tubes Not Included

US VWR NUMBER	DESCRIPTION
<b>BK369704†</b>	ARIES 4 x 750 mL Smart Balance Swinging-bucket Rotor (SX4750A)
<b>BK392805</b>	BioCertified Bucket Covers (Set of 2)

## Microplate Carriers for 4 x 750 mL Rotor (SX4750 and SX4750A)

Each carrier accommodates up to four standard microplates, one Beckman Coulter deep-well plate or one square-well plate. Provides the following g-forces for cellular assays and quick microplate spins: Allegra 6 Series / 2,885 x g (3,750 RPM); Allegra X-12 Series / 2,885 x g (3,750 RPM); Allegra X-14 Series / 3,283 x g (4,000 RPM); and Allegra X-15R / 4,060 x g (4,450 RPM). For use with the SX4750 and SX4750A.



Microplate Not Included

**Ordering Information:** Each Microplate Carrier Assembly includes carriages and rubber pads (Set of 2).

US VWR NUMBER	DESCRIPTION
<b>BK392806*</b>	Microplate Carrier Assembly (Set of 2)
<b>BK393070</b>	BioCertified Covers for SX4750 or SX4750A Microplate Carriers (Set of 2)

## REPLACEMENT PARTS

US VWR NUMBER	DESCRIPTION
<b>BK392873</b>	Carriages (Set of 2 Includes Rubber Pads)
<b>BK392872</b>	Rubber Pads (Set of 4)

BioCertified is a term used to describe our products which have been tested and validated to demonstrate containment of microbiological aerosols by an independent, third-party facility. Improper use or maintenance may affect seal integrity and, thus, containment.

† Rotor is BioCertified when used in conjunction with bucket covers.

\* Rotor is BioCertified when used with four sealed buckets & covers.

# ALLEGRA 25R SERIES ROTORS

## Microplate Rotor with Transparent Bucket Covers (SX5700)

- Up to 5,021 x g (5,700 RPM)
- Includes 2 buckets, 2 plates/ carriers and 2 lid covers



Microplates Not Included

US VWR NUMBER	DESCRIPTION
BKA49595	Swinging-bucket Rotor, 2 x 6 plates

## 8 x 50 mL Fixed-angle Rotor (TA-14-50)

- 8 x 50 mL at 21,100 x g (14,000 RPM)
- Includes rotor, lid and O-ring



US VWR NUMBER	DESCRIPTION
BK368303	Fixed-angle Rotor, 8 x 50 mL

## 30 x 1.5 mL Fixed-angle Rotor (TA-15-1.5)

Manual Mini-preps, Spin Columns from QIAGEN,<sup>®</sup> Amicon,<sup>®</sup> and Promega<sup>®</sup>

- 30 x 1.5 mL at 25,160 x g (15,000 RPM)
- Manual pelleting of DNA or proteins
- Spin columns
- Diltration kits
- Adapters to accommodate 250, 400 and 750 µL



Tubes Not Included

US VWR NUMBER	DESCRIPTION
BK368298 	Fixed-angle Rotor, 1.5/2.0 mL

## Adapters for the TA-15-1.5 Fixed-angle Rotor

US VWR NUMBER	DESCRIPTION
BK364701	1.5/1.8 mL Microcentrifuge Tubes Package (Set of 12)
BK361247	250/400µL Microcentrifuge Tubes (Package of 24)
BK364690	500/750µL Vial (Package of 12)

## 4 x 500 mL Swinging-bucket Rotor (TS-5.1-500)

### Cell Separation

- Up to 2 liters (4 x 500 mL)\*
- 5,530 x g (5,100 RPM)
- Spin tubes and bottles - 0.40 to 500 mL
- Microplates at 3,010 x g (4,100 RPM)
- Bucket covers are certified for biocontainment
- Includes 4 removable buckets



Bottles Not Included

\* Only Beckman Coulter 500 mL bottles BK368453 and BK368454 can be used in BK368308 rotor

US VWR NUMBER	DESCRIPTION
BK368308†	Swinging-bucket Rotor 4 x 500 mL, Includes 4 Removable Buckets

## Adapters and Bottles for the TS-5.1-500 Swinging-bucket Rotor (all come in pack of 2)

US VWR NUMBER	DESCRIPTION	CAPACITY	TUBE SIZE (MM)
BK368453	500 mL Polypropylene Bottle with Screw Cap	1	85 x 135
BK368454	500 mL Polycarbonate Bottle with Screw Cap	1	85 x 135
<i>500 mL bottles fit directly into the rotor; no adapter required</i>			
BK368454	500 mL Polycarbonate Bottle with Screw Cap	1	85 x 135
BK392256	Adapter for 250 mL Bottle	1	62 x 122
BK368457	Adapter for 180/200 mL Bottle	1	56 x 122
BK368458	Adapter for 125 mL Bottle	1	50 x 102
BK368459	Adapter for 100 mL Bottle	1	45 x 102
BK368477	Adapter for 50 mL Round-Bottom Tube	4	29 x 104
BK368460	Adapter for 50 mL Conical Tube with Standing Rim	4	28.5 x 100
BK368461	Adapter for 50 mL Conical Tube	4	30 x 120
BK368462	Adapter for 30 mL Tube	5	26 x 100
BK368463	Adapter for 25 mL Glass Tube	5	24 x 100
BK368464	Adapter for 15 mL Conical Tube	9	17 x 120
BK368465	Adapter for 10-15 mL Tube	12	17 x 115
BK368467	Adapter for Vacutainer/Hemolyse/RIA Tubes	16	13 x 75
BK368468	Adapter for 10 mL Tube	12	16 x 80
BK368469	Adapter for 7 mL Glass Tubes	16	13 x 100
BK368470	Adapter for 1.5-2.2 mL Microcentrifuge Tubes	16	11 x 38

## Microplate Carrier Assembly for TS-5.1-500 Swinging-bucket Rotor

US VWR NUMBER	DESCRIPTION	MAX SPEED/RPM	MAX RCF, x g
BK368451	Microplate Carriers – Two Standard Plates or One Deep-well Plate Per Carrier (Set of 2)	4,100	3,010

## 6 x 250 mL Fixed-angle Rotor (TA-10-250)

Cell Lysing, Crude DNA Pelleting, Maxi Kits

- 1.5 L capacity (6 x 250 mL)
- 15,300 x g (10,000 RPM)
- 6 x 250 mL flat-bottom bottles
- 24 x 15 mL and 6 x 50 mL conical tubes
- 6 x 230 mL conical bottles



US VWR NUMBER	DESCRIPTION
BK368293	Fixed-angle Rotor, 6 x 250 mL

## Adapters for the TA-10-250 Fixed-angle Rotor

US VWR NUMBER	DESCRIPTION
BK356995	15 mL Round-bottom Tube, 18 mm Max. Tube Diameter, 5 Place (Qty. 1)
BK356964	15 mL Conical Tubes, 17 mm Max. Tube Diameter, 4 Place (Qty. 1)
BK356997	50 mL Round-bottom Tube, 29 mm Max. Tube Diameter, 1 Place (Qty. 1)
BK356966	50 mL Conical Tube, 29 mm Max. Tube Diameter, 1 Place (Qty. 1)
BK356983	230 mL Conical Bottle (Cushions), 60 mm Max. Tube Diameter (Set of 4)

## Microplate/Filtration Kit Swinging-bucket Rotor (S5700)

Isolation with DNA Filtration Kits, Post-reaction cleanup

- Up to 6,130 x g
- 10 standard microplates
- 4 deep-well or 2 square-well plates
- 2 filtration kits
- 2 PCR plates
- Includes microplate carriers with support pads (Set of 2)



Microplates Not Included

US VWR NUMBER	DESCRIPTION
BK368954	Swinging-bucket Rotor, 2 x 96-well Kit, 2 x 5 Microplates, 2 x 2 Deep-well Plates, Includes Microplate Carriers (Set of 2)

## S5700 Supplies

US VWR NUMBER	DESCRIPTION
BK368920	Microplate Carrier Kit (Set of 2)
BK369382	Support Pad (Set of 4)
BK267002	96-well Cap Mat (Non-sterile)
BK267005	96-well Cap Mat (Sterile)

All other trademarks are the properties of their respective owners.

BioCertified is a term used to describe our products which have been tested and validated to demonstrate containment of microbiological aerosols by an independent, third-party facility. Improper use or maintenance may affect seal integrity and, thus, containment.

# MICROCENTRIFUGES

## Microfuge 16 Microcentrifuge<sup>1</sup>



Entry-level instrument for maximum productivity

- Spins quietly at 16,163 x g for fast pelleting or isolation of DNA, RNA, proteins and viruses
- Autoclavable 24-place rotor rated at 14,800 RPM
- Large, bright push button display and automatic lid release
- Cold room compatible with a compact footprint measuring 8.9 by 10.5 inches
- Fast accel/decel with optional pulse, timed, or continuous runs
- 2-year warranty included

US VWR NUMBER	DESCRIPTION
<b>BKA46472</b>	Microfuge 16 w/FX241.5P Rotor; 100-120 V, 50/60 Hz
<b>BKA46475</b>	24 x 2.2 mL (FX241.5P) Microfuge Fixed-angle Polypropylene Rotor w/Snap-on Lid
<b>BKA46476</b>	12 x 1.5/2.0 mL (FX121.5P) Microfuge Fixed-angle Polypropylene Rotor /Snap-on Lid
<b>BKA46474</b>	Microfuge Only, 100-120V, 50/60Hz

### MICROFUGE SPECIFICATIONS

	Microfuge 16	Microfuge 20	Microfuge 20R
<b>Max. Speed:</b>	14,800 RPM adjustable in 100 RPM increments	15,000 RPM adjustable in 100 RPM increments	15,000 RPM adjustable in 100 RPM increments
<b>Max. g-force:</b>	16,163 x g	20,627 x g	20,627 x g
<b>Max. Capacity:</b>	24 x 1.5/2.0 mL	36 x 1.5/2.0 mL	36 x 1.5/2.0 mL
<b>Run Time:</b>	99 mins., 59 sec., continuous run, short run	99 mins., 59 sec., continuous run, short run	99 mins., 59 sec., continuous run, short run
<b>User Defined Programs:</b>	None	10	10
<b>Noise Level at Max. Speed:</b>	< 60 dBA	< 59 dBA	< 58 dBA
<b>Accel/Decel Profiles:</b>	-	Fast, soft	Fast, soft
<b>Temperature Range:</b>	-	-	-10°C to +40°C (in 1°C increments)
<b>Temperature Control:</b>	-	-	±2.5°C
<b>Ambient Temperature Range:</b>	+4°C to +40°C	+5°C to +40°C	+5°C to +35°C
<b>Maximum Heat Dissipation into Room:</b>	324 Btu/h (90 W)	580 Btu/h (170 W)	1433 Btu/h (420 W)
<b>Dimensions (in)</b>	8.9w x 10.5d x 6.9h	12.2w x 16.5d x 10.7h	12.2w x 26.0d x 11.5h
<b>Dimensions (cm)</b>	22.6w x 26.6d x 17.6h	31.0w x 42.0d x 27.0h	31.0w x 66.0d x 29.1h
<b>Weight:</b>	6.4 kg (14 lbs.)	13 kg (28.6 lbs.)	32 kg (70.5 lbs.)
<b>Electrical Requirements:</b>	100-120 VAC, 50/60 Hz	120 VAC, 60 Hz	120 VAC, 60 Hz

<sup>1</sup> General purpose model

\*\* BioSafe and BioSafety are terms intended to describe the enhanced biocontainment features of our products

\* BioCertified is a term used to describe our products which have been tested and validated to demonstrate containment of microbiological aerosols by an independent, third-party facility. Improper use or maintenance may affect seal integrity and, thus, containment.

This label indicates recognition by a Nationally Recognized Test Laboratory (NRTL) that the instrument has met the relevant product safety standards

## Microfuge 20 Series



Our top-of-the-line high-performance microcentrifuges

- Refrigerated (Microfuge 20R) and Non-refrigerated (Microfuge 20) models
- Quickly process samples at maximum speeds of up to 15,000 RPM (20,627 x g)
- Spin more samples per run with a maximum capacity of 36 x 1.5/2.0 mL tubes
- Save setup time with an easy-to-use interface and up to 10 user-defined programs for common protocols
- Safely process samples with optional BioCertified\* FA361.5 fixed-angle rotor
- Lower utility costs with increased energy efficiency
- 2-year warranty included



US VWR NUMBER	DESCRIPTION
<b>89429-540</b>	Microfuge 20, IVD, w/FA241.5P Rotor, 120V/60 Hz
<b>89429-542</b>	Microfuge 20, IVD, w/FA241.5 Rotor, 120V/60 Hz
<b>89429-544</b>	Microfuge 20, IVD, w/BioC FA361.5 Rotor, 120V/60 Hz
<b>89429-546</b>	Microfuge 20R, IVD, w/FA241.5P Rotor, 120V/60 Hz
<b>89429-548</b>	Microfuge 20R, IVD, w/FA241.5 Rotor, 120V/60 Hz
<b>89429-550</b>	Microfuge 20R, IVD, w/BioC FA361.5 Rotor, 120V/60 Hz

## MICROFUGE 16 ROTORS

Ideal for fast pelleting or isolation of DNA, RNA, proteins and viruses.

### 24 x 1.5/2.0 mL (FX241.5P) fixed-angle polypropylene rotor with snap-on lid

- 14,800 RPM (16,163 x g)
- Two concentric rows delivering same max. g-force to samples placed in both rows



Tubes Not Included

US VWR NUMBER	DESCRIPTION
BKA46475	24 x 1.5/2.0 mL (FX241.5P) fixed-angle polypropylene rotor with snap-on lid

### 12 x 1.5/2.0 mL (FX121.5P) fixed-angle polypropylene rotor with snap-on lid

- 14,800 RPM, (15,183 x g)



Tubes Not Included

US VWR NUMBER	DESCRIPTION
BKA46476	12 x 1.5/2.0 mL (FX121.5P) fixed-angle polypropylene rotor with snap-on lid

## MICROFUGE ACCESSORIES

### Adapters for Microfuge Rotors FX241.5P, FX121.5P, FA241.5, FA241.5P, and FA361.5

US VWR NUMBER	DESCRIPTION
BK361247	0.25/0.4 mL PCR microcentrifuge tube adapter (pkg. of 24)
BK364690	0.5/0.6/0.75 mL PCR microcentrifuge tube adapters (pkg. of 12)
BK392294	0.2 mL PCR microcentrifuge tube adapter (pkg. of 12)

### Replacement Lids for Microfuge 20 Series Rotors

US VWR NUMBER	DESCRIPTION
89429-560	Snap-on lid for FA241.5, FA241.5P and FA4X8.2P Rotors
89429-562	Screw-on lid for FA241.5, FA241.5P and FA4X8.2P Rotors
89429-564	BioSafe** Screw-on lid for FA361.5 Rotor

## MICROFUGE 20 ROTORS

Ideal for nucleic and protein preparation; pelleting, extractions, purifications, concentrations, phase separations and receptor binding; and rapid sedimentation of protein precipitates, particulates and cell debris

### 24 x 1.5/2.0 mL (FA241.5P) fixed-angle polypropylene rotor with snap-on lid

- 15,000 RPM, (20,627 x g)



Tubes Not Included

US VWR NUMBER	DESCRIPTION
89429-554	24 x 1.5/2.0 mL (FA241.5P) fixed-angle polypropylene rotor with snap-on lid

### 24 x 1.5/2.0 mL (FA241.5) fixed-angle aluminum rotor with snap-on lid

- 15,000 RPM, (20,627 x g)




Tubes Not Included

US VWR NUMBER	DESCRIPTION
89429-552	24 x 1.5/2.0 mL (FA241.5) fixed-angle aluminum rotor with snap-on lid

### 36 x 1.5/2.0 mL (FA361.5) BioCertified\* fixed-angle aluminum rotor with aerosol-tight lid

- 15,000 RPM, (20,124 x g)



US VWR NUMBER	DESCRIPTION
89429-556 	36 x 1.5/2.0 mL (FA361.5) BioCertified* fixed-angle aluminum rotor with aerosol-tight lid

### 4 x 8 (0.2 mL) (FA4x8.2P) PCR tube strip fixed-angle polypropylene rotor with snap-on lid

- 15,000 RPM, (16,602 x g)



US VWR NUMBER	DESCRIPTION
89429-558	4 x 8 (0.2 mL) (FA4x8.2P) PCR tube strip fixed-angle polypropylene rotor with snap-on lid

# HIGH-PERFORMANCE & HIGH-CAPACITY CENTRIFUGES

## Avanti JXN Centrifuge Series

*The versatility you need. The performance you expect.*

The Avanti JXN series is comprised of two top-of-the-line, high-performance/high-capacity refrigerated centrifuges which generate centrifugal forces required for a wide variety of applications. The Avanti JXN-30 (4L) centrifuge achieves a maximum  $g$ -Force of 108,860  $\times g$  with the JA-30.50 Ti fixed-angle rotor. In addition, the Avanti JXN-30 also achieves a maximum  $g$ -Force of 103,860  $\times g$  with the JS-24.38 and of 110,510  $\times g$  with the JS-24.15 swinging-bucket rotors. The Avanti JXN-26 (6L) can reach up to 81,770  $\times g$  with the JA-30.50 Ti fixed-angle rotor and offers an efficient (6L) high-capacity fixed-angle rotor, the JLA-8.1000. Both centrifuges provide backward compatibility with the existing Avanti rotor library.

*(Please refer to the Avanti User Guide for the list of compatible rotors.)*

### Works Remotely

- Easily monitor and control the Avanti JXN-26 or the Avanti JXN-30 centrifuge functions remotely via computer, using Virtual Network Computing (VNC) software, or with a mobile device (Apple® iOS and Android™) with the custom MobileFuge application
- Set and monitor run parameters remotely and receive alerts and diagnostic results via e-mail

### Perfect to Support Shared Labs and GMP Environment

- Provides on-screen text sensitive “help” screen and real-time run graphing
- Allows up to 1000 user-defined programs; set up and store numerous protocols
- Enables password protection for up to 50 unique user profiles
- Allows users to network multiple instruments

### Intuitive Interface

- With large, user-friendly LCD screen
- Select rotor by name, not by arcane number code
- View set and actual run conditions simultaneously
- Delay start
- Run times to 99.59, Hold, and  $\omega$ t2 integrator for applications that require exquisite reproducibility



### Versatile Across Rotors and Applications

- Compatible with an extensive library of fixed-angle and swinging-bucket rotors including the lightweight J-Lite rotors

### Safe and Sustainable

- Dynamic Rotor Inertia Check (DRIC) and rotor recognition provide redundant safety checks to ensure no rotor can be run above its rated speed
- Temperature control is optimized ensuring sample quality and avoiding unwanted artifacts
- Friction Reduction System (FRS) allows quicker, quieter, and cooler runs
- High-torque, Switched Reluctance (SR) drive cycle shortens cycle times
- BioSafe options for the centrifuge and rotors

### Ergonomic Design

- Low work surface height for easier installation and unloading of rotors
- Large digital readouts make operation simpler
- Foot pedal for hands-free door operation



## AVANTI JXN SPECIFICATIONS



	Avanti JXN-30	Avanti JXN-26
<b>Max. Speed/g-Force (Depending on the rotor):</b>	30,000 RPM/ 110,510 x g	26,000 RPM/ 81,770 x g
<b>Accel/Decel Rates:</b>	11/12	11/12
<b>Maximum Capacity:</b>	4 Liters	6 Liters
<b>Set Temp Range: (1° increments)</b>	-20 to 40°C	-10 to 40°C
<b>Temp. Accuracy:</b>	± 2°C of chamber temp after equilibration	± 2°C of chamber temp equilibration
<b>Speed Control (2 Levels):</b>	Low speed = +/- 10 RPM High speed = +/- 0.15%	Low speed = +/- 10 RPM High speed = +/- 0.1%
<b>Ambient Temp Range:</b>	16° to 38°C	16° to 38°C
<b>Drive Type:</b>	Brushless, High Torque SR* Drive	Brushless, High Torque SR* Drive
<b>Refrigeration System:</b>	Non-CFC-based refrigerant	Non-CFC-based refrigerant
<b>Maximum Heat Dissipation (under steady state conditions)</b>	1.5 kW / 5120 Btu/hr	1.5 kW / 5120 Btu/hr
<b>Noise Output:</b>	62dBa (1.0 m in ft from instrument, 1.5 m above floor)	62dBa (1.0 m in ft from instrument, 1.5 m above floor)
<b>Dim. w/ Door Closed:</b>	71w x 86d x 86h cm	71w x 86d x 86h cm
<b>Weight:</b>	310 kg (680 lb)	290 kg (640 lb)
<b>HEPA Filter:</b>	Optional	Optional

## JA-14.50 FIXED-ANGLE ROTOR

*Tubes not Included*

- Highest g-Force and most efficient 50 mL fixed-angle rotor in its class
- 16 cavities for maximum throughput
- Can spin 50 mL (conical), 15 mL (conical and round) and 5 mL (conical). (Please refer to the rotor manual for the list of compatible tubes and adapters.)



## AVANTI JXN MODELS

US VWR NUMBER	DESCRIPTION
10210-212	Avanti JXN-30, IVD, 200-240V, 50/60Hz, 24A
10119-926	Avanti JXN-26, IVD, 200-240V, 50/60Hz, 24A

# Avanti J-26S XP

## Simplicity with performance

Simple interface with access to a large rotor library with speeds and volumes to support applications for cells, proteins and harvesting.

Built upon standard-setting performance, including high speed, low heat output, imbalance tolerance and low noise, the J-26S XP's vast range of separations only continues to grow, and now it offers three-phase filtration that further separates sludge materials into solids, liquids and gases.

The addition of the HEPA (high-efficiency particulate arrestance) filter kit makes the instrument BioSafe. The J-26S XP centrifuge has a more impact-resistant lid, full containment barrier and automatic rotor identification. Its ergonomic design—with lower instrument height and hands-free door operation—remains unchanged.

The J-26S XP can process six liters of fermentor output in less than 10 minutes, deliver a subcellular fraction at 82,000 x *g* and run 24 microplates at a time. It automatically detects which rotor is installed and prevents the rotor from running above its maximum-rated speed, and enables quicker, quieter, more energy-efficient runs with better temperature control. The exclusive high-torque, switched reluctance (SR) drive shortens cycle times.






## AVANTI J-26S XP MODEL

US VWR NUMBER	DESCRIPTION
76640-776	Avanti J-26S XP BioSafe Three-Phase Non-IVD Centrifuge, 50 Hz, 220V

## AVANTI J-26S XP SPECIFICATIONS

	Avanti J-26S XP
Max. Speed/g-Force	26,000 rpm/81,770 x <i>g</i>
Max. Capacity	6 Liters
Speed Control	Low Speed ± 10 rpm of set speed High Speed ± 0.1% rpm of set speed
Set Temperature	-10°C to 40°C in 1° increments
Temperature Accuracy	±2° C of chamber temperature (after equilibration)
Ambient Operating Range	16°C to 38°C
Accel/Decel Profiles	2/3
Heat Output	6900 BTU/hr (2.0 kW)
Drive Type/Cooling	SR drive/Air-cooled
Refrigeration	Refrigerant R452A (HFO)
Sound Level	57 dBA (0.91 m / 3 ft from instrument at maximum speed)
Dimensions	71 W x 86 D x 86 H cm (28 W x 34 D x 34 H in)
Weight	290 kg (640 lbs)

## AVANTI J-26S XP ROTORS

US VWR NUMBER	DESCRIPTION	MAX CAPACITY	MAX. SPEED RPM JXN-26 / JXN-30	MAX. RCF, x g JXN-26 / JXN-30
<b>FIXED-ANGLE</b>				
<b>BK363421</b>	Fixed-angle, JA-30.50 Ti	8 x 50 mL	26,000 / 30,000	81,770 / 108,860
<b>BK363420</b>	Fixed-angle, JA-30.50 Ti Dual-Locking Lid	8 x 50 mL	26,000 / 30,000	81,770 / 108,860
<b>BK363055</b>	Fixed-angle, JA-25.50	8 x 50 mL	25,000 / 25,000	75,600 / 75,600
<b>BK363058</b>	Fixed-angle, JA-25.50 Dual-Locking Lid	8 x 50 mL	25,000 / 25,000	75,600 / 75,600
<b>BK363054</b>	Fixed-angle, JA-25.15	24 x 15 mL	25,000 / 25,000	74,200 / 74,200
<b>BK363050</b>	Fixed-angle, JA-25.15 Dual-Locking Lid	24 x 15 mL	25,000 / 25,000	74,200 / 74,200
<b>BK334845</b>	Fixed-angle, JA-21	18 x 10 mL	21,000 / 21,000	50,380 / 50,380
<b>BK342095</b>	Fixed-angle, JA-20.1	32 x 15 mL	20,000 / 20,000	51,520 / 51,520
<b>BK334831</b>	Fixed-angle, JA-20	8 x 50 mL	20,000 / 20,000	48,380 / 48,380
<b>BK347824</b>	Fixed-angle, JA-18.1	24 x 1.8 mL	18,000 / 18,000	42,090 / 42,090
<b>BK369679</b> 	Fixed-angle, JA-18	10 x 100 mL	18,000 / 18,000	47,900 / 47,900
<b>BK369691</b> 	Fixed-angle, JA-17	14 x 50 mL	17,000 / 17,000	39,810 / 39,810
<b>BK363934</b>	Fixed-angle, JLA-16.250	6 x 250 mL	16,000 / 16,000	38,420 / 38,420
<b>BK363930</b> 	Fixed-angle, JLA-16.250 Dual-Locking Lid	6 x 250 mL	16,000 / 16,000	38,420 / 38,420
<b>BKB88555</b>	Fixed-angle, JA-14.50	16 x 50 mL c	14,000 / 14,000	35,000 / 35,000
<b>BKB88554</b> 	Fixed-angle, JA-14.50 Dual-Locking Lid	16 x 50 mL c	14,000 / 14,000	35,000 / 35,000
<b>BK339247</b> 	Fixed-angle, JA-14	6 x 250 mL	14,000 / 14,000	30,070 / 30,070
<b>BK360993</b>	Fixed-angle, JA-12	12 x 50 mL c	12,000 / 12,000	23,220 / 23,220
<b>BK360992</b> 	Fixed-angle, JA-12 Dual-Locking Lid	12 x 50 mL c	12,000 / 12,000	23,220 / 23,220
<b>BK369687</b>	Fixed-angle, JA-10	6 x 500 mL	10,000 / 10,000	17,700 / 17,700
<b>BK369681</b> 	Fixed-angle, JLA-10.500 <sup>††</sup>	6 x 500 mL	10,000 / NA	18,590 / NA
<b>BK366754</b>	Fixed-angle, JLA-9.1000	4 x 1 liter	9,000 / 9,000	16,780 / 16,780
<b>BK363688</b> 	Fixed-angle, JLA-8.1000 <sup>†</sup>	6 x 1 liter	8,000 / NA	15,970 / NA
<b>SWINGING-BUCKET</b>				
<b>BK360743</b>	Swinging-bucket, JS-24.38	6 x 38.5 mL	10,000 / 24,000	18,030 / 103,860
<b>BK362396</b>	Swinging-bucket, JS-24.15	6 x 15 mL	10,000 / 24,000	19,190 / 110,510
<b>BK346963</b>	Swinging-bucket, JS-13.1	6 x 50 mL	13,000 / 13,000	26,500 / 26,500
<b>BK336380</b>	Swinging-bucket, JS-7.5	4 x 250 mL	7,500 / 7,500	10,400 / 10,400
<b>BK368690</b> 	Swinging-bucket, JS-5.3 AllSpin <sup>††</sup>	4 x 500 mL c	5,300 / NA	6,870 / NA
<b>BK362734</b> 	Swinging-bucket, JS-4.3 <sup>†††</sup>	4 x 750 mL	4,300 / NA	4,220 / NA
<b>BK339086</b> 	Swinging-bucket, JS-4.0 <sup>††</sup>	4 x 1 liter	4,000 / NA	4,050 / NA

<sup>c</sup> = Conical

\* SR Drives are manufactured by Beckman Coulter with technology licensed from Switched Reluctance Drives Limited.

\*\* BioSafe and BioSafety are terms intended to describe the enhanced biocontainment features of our products.

†  BioCertified when used in conjunction with associated BioSafe Aerosol Covers, Bucket Covers, or Bottle Assembly.

†† Rotor is BioCertified when used in conjunction with Bucket Covers or Aerosol Covers.

††† Rotor is BioCertified when used with Aerosolve Canisters.

‡ Rotor is BioCertified when used with 1 L container (not covers).

†† BioCertified is a term used to describe our products which have been tested and validated to demonstrate containment of microbiological aerosols by an independent, third-party facility. Improper use or maintenance may affect seal integrity and, thus, containment.

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Android is a trademark of Google, Inc.

## AVANTI J6 ROTORS FOR MAXIMUM APPLICATIONS VERSATILITY

Beckman Coulter rotors are designed to help you get the most from your J6 Series instrument. Workhorse swinging-bucket rotors were designed with versatility in mind. By choosing the necessary adapter(s), these rotors can spin everything from tissue culture in 1-liter bottles to blood bags. Special carriers for microtiter plates slip right into the rotor yokes that hold swinging-buckets, quickly converting the rotor to a special-purpose separation tool.

US VWR NUMBER	ROTOR TYPE	ROTOR CAPACITY	MAX. SPEED RPM	MAX FORCE AT R MAX (G)	APPROX. ACCEL./ DECEL. TIME
<b>SWINGING-BUCKET</b>					
<b>BK366695</b>	JS-4.2A ARIES <sup>+</sup> (windshielded)	6 Liters, 6 blood bags, 18 microplates, 336 RIA tubes	4,200	5,020 (254 mm)	2.5 / 3.0 min.
<b>BK339080</b>	JS-4.2 <sup>+</sup> (windshielded)	6 Liters, 6 blood bags, 18 microplates, 336 RIA tubes	4,200	5,020 (254 mm)	2.5 / 3.0 min.
<b>BK339086</b>	JS-4.0 (unshielded)	4 Liters, 4 blood bags, 12 microplates, 148 RIA tubes	4,000	4,050 (226 mm)	2.0 / 1.5 min.
<b>BK339081</b>	JS-3.0 <sup>+</sup> (unshielded)	6 Liters, 6 blood bags, 18 microplates, 336 RIA tubes	3,000	2,560 (254 mm)	2.0 / 1.5 min.

<sup>+</sup> BioCertified when used in conjunction with Aeroseal Covers Cat. No. BK343650.

### ACCESSORIES

<b>BK343686</b>	Aeroseal Covers <sup>^</sup> for all J6 Rotors except for JS-4.2SM	--	--	--	--
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<sup>^</sup> Must use Multi-disk Bracket Adapter Assembly Cat. No. BK343369 when Aeroseal Covers are used in round buckets.

### SWINGING-BUCKET ROTORS FOR BLOOD BAGS

<b>BK366670</b>	JS-4.2SMA ARIES (windshielded)	6 blood bags	4,200	4,900 (116 mm)	2.5 / 3.0 min.
<b>BK348394</b>	JS-4.2SM (windshielded)	6 blood bags	4,200	4,900 (248 mm)	2.5 / 3.0 min.

## AVANTI MODULAR DISK ADAPTERS

US VWR NUMBER	COLOR CODE	TYPICAL TUBE/BOTTLE SIZES USED	MAX TUBE DIAMETER	DISKS PER ADAPTER	TUBES PER ADAPTER	TUBE CAPACITY FOR JS-5.2 OR JS-4.0 ROTOR	TUBE CAPACITY FOR JS-4.2 OR JS-3.0 ROTOR
<b>BK339100</b>	Blue	3 mL and 5 mL	12 mm	5	37	148	222
<b>BK339101</b>	Orange	10 mL	14 mm	6	24	96	144
<b>BK341977</b>	Purple	12 mL	16 mm	8	19	76	114
<b>BK339102*</b>	Green	20 mL	18 mm	8	14	56	84
<b>BK339103</b>	Yellow	50 mL	28 mm	7	7	28	42
<b>10769-310</b>	Lt. Green	50 mL (Conical)	29 mm	5	4	16	24
<b>BK341794</b>	Dark Blue	50 mL	35 mm	7	4	16	24
<b>BK339104</b>	Brown	100 mL	44 mm	4	2	8	12
<b>BK339108</b>	Red	250 mL	62 mm	8	1	4	6
<b>BK339109</b>	Yellow	500 mL	70 mm	9	1	4	6

\*Can also run 15 mL conical tubes in this adapter.
















### BOTTLE SLEEVE

<b>BK356096</b>	Blue	1 liter and 750 mL	98 mm	—	1	4	6
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# CENTRIFUGE & ROTOR SELECTION GUIDE

CENTRIFUGE AND ROTOR OPTIONS	US VWR NUMBER	MAXIMUM CAPACITY	MAXIMUM SPEED, RPM	MAXIMUM RCF, x g
<b>Microfuge 16 Microcentrifuge</b>				
Fixed-angle FX241.5P	<b>BKA46475</b>	24 x 1.5/2.0 mL	14,800	16,163
Fixed-angle FX121.5P	<b>BKA46476</b>	12 x 1.5/2.0 mL	14,800	15,183
<b>Microfuge 20 Microcentrifuge Series</b>				
 Fixed-angle, FA361.5	<b>89429-556</b>	36 x 1.5/2.0 mL	15,000	20,124
Fixed-angle, FA241.5	<b>89429-552</b>	24 x 1.5/2.0 mL	15,000	20,627
Fixed-angle, FA241.5P	<b>89429-554</b>	24 x 1.5/2.0 mL	15,000	20,627
PCR* Tube Strip, FA4x8.2P	<b>89429-558</b>	4 x 8 (0.2 mL)	15,000	16,602
<b>Allegra X-12 Series, X-14 Series and X-15R Benchtop Centrifuge</b>				
 Swinging-bucket, SX4750* <sup>†</sup>	<b>BK369702</b>	4 x 750 mL	4,750	5,250
 ARIES Swinging-bucket, SX4750A* <sup>†</sup>	<b>BK369704</b>	4 x 750 mL	4,750	5,250
 Fixed-angle, FX6100	<b>BK369735</b>	6 x 100 mL	10,200	11,400
<b>Allegra 6 Benchtop Centrifuge Series</b>				
Fixed-angle, GA-6	<b>BK367054</b>	6 x 250 mL	6,100	5,710
 Swinging-bucket, GH-3.8 <sup>†</sup>	<b>BK360581</b>	4 x 750 mL	3,750	3,210
<b>Allegra X-30 Benchtop Centrifuge Series**</b>				
Swinging-bucket, SX4400 <sup>†</sup>	<b>BKB01425</b>	4 x 400 mL	4,700	4,255
Swinging-bucket, SX4250	<b>BK392243</b>	4 x 250 mL	4,500	3,901
Swinging-bucket, SX241.5	<b>BK392271</b>	24 x 1.5/2.0 mL	14,000	16,244
Microplate S6096	<b>BKB01430</b>	2 x 1 Deep-well Plates	4,700	2,721
Microplate S2096	<b>BK361111</b>	2 x 1 Deep-well Plates	3,000	1,107
 Fixed-angle F2402H	<b>BK361171</b>	24 x 1.5/2.0 mL	18,000	29,756
Fixed-angle FX-301.5	<b>BK392274</b>	30 x 1.5/2.0 mL	16,000	28,672
Fixed-angle F1010	<b>BK361221</b>	10 x 10 mL	18,000	27,579
Fixed-angle F0630	<b>BK361231</b>	6 x 30 mL	18,000	28,305
Fixed-angle F0850	<b>BK364640</b>	8 x 50 mL	11,400	13,682
Fixed-angle F0685	<b>BK364650</b>	6 x 85 mL	10,000	10,864
Fixed-angle C1015	<b>BK364680</b>	10 x 15 mL conical	10,000	10,416
Fixed-angle C0650	<b>BK364670</b>	6 x 50 mL conical	10,000	10,304
<b>Allegra 25R Benchtop Centrifuge</b>				
 Swinging-bucket TS-5.1-500 <sup>†</sup>	<b>BK368308</b>	4 x 500 mL	5,100	5,530
Swinging-bucket S5700	<b>BK368954</b>	2 x 5 plates	5,700	6,130
Swinging-bucket SX5700	<b>BKA49595</b>	2 x 6 plates	5,700	5,021
Fixed-angle TA-10-250	<b>BK368293</b>	6 x 250 mL	10,000	15,300
Fixed-angle TA-14-50	<b>BK368303</b>	8 x 50 mL	14,000	21,100
 Fixed-angle TA-15-1.5	<b>BK368298</b>	30 x 1.5/2.0 mL	15,000	25,160
<b>Allegra 64R Benchtop Centrifuge</b>				
Fixed-angle F1202	<b>BK364630</b>	12 x 1.5/2.0 mL	30,000	64,400

CENTRIFUGE AND ROTOR OPTIONS	US VWR NUMBER	MAXIMUM CAPACITY	MAXIMUM SPEED, RPM	MAXIMUM RCF, x g
 Fixed-angle F2402H	BK361171	24 x 1.5/2.0 mL	26,000	61,970
Fixed-angle F3602	BK364600	36 x 1.5/2.0 mL	22,000	47,620
Fixed-angle F1010	BK361221	10 x 10 mL	26,000	57,440
Fixed-angle F0630	BK361231	6 x 38.5 mL	26,200	59,860
Fixed-angle F0650	BK364610	6 x 50 mL round	21,000	41,400
Fixed-angle F0850	BK364640	8 x 50 mL round	16,500	29,220
Fixed-angle F0485	BK364620	4 x 85 mL	20,000	40,700
Fixed-angle F0685	BK364650	6 x 85 mL	15,500	26,320
Fixed-angle C1015	BK364680	10 x 15 mL conical	10,000	10,400
Fixed-angle C0650	BK364670	6 x 50 mL conical	10,000	10,400
 Fixed-horizontal H6002	BK363000	60 x 1.5/2.0 mL	12,200	12,400
Swinging-bucket S0410	BK364660	4 x 10 mL	10,000	10,730
<b>Airfuge Benchtop Ultracentrifuge</b>				
Fixed-angle A-110	BK347596	6 x 180 µL	110,000	199,000
Fixed-angle A-100/30	BK347594	6 x 240 µL	92,000	167,000
Fixed-angle A-100/18	BK347593	6 x 175 µL	95,000	149,000
Fixed-angle A-95	BK347595	4 x 450 µL	95,000	178,000
Batch Rotor	BK347833	7 mL	90,000	132,000
Electron Microscopy Rotor	BK347844	6 x 100 µL	90,000	118,000
ACR-90 Chylomicron Rotor	BK341260	2.6 mL	90,000	122,000
<b>Avanti JXN High-Performance &amp; High-Capacity Centrifuge Series</b>			<b>Max. Speed RPM JXN-26 / JXN-30</b>	<b>Max. RCF, x g JXN-26 / JXN-30</b>
Fixed-angle JA-30.50 Ti	BK363421	400 mL	26,000 / 30,000	81,770 / 108,860
Fixed-angle JA-30.50 Ti Dual-Locking Lid	BK363420	400 mL	26,000 / 30,000	81,770 / 108,860
Fixed-angle JA-25.50	BK363055	400 mL	25,000 / 25,000	75,600 / 75,600
Fixed-angle JA-25.50 Dual-Locking Lid	BK363058	400 mL	25,000 / 25,000	75,600 / 75,600
Fixed-angle JA-25.15	BK363054	360 mL	25,000 / 25,000	74,200 / 74,200
Fixed-angle JA-25.15 Dual-Locking Lid	BK363050	360 mL	25,000 / 25,000	74,200 / 74,200
Fixed-angle JA-21	BK334845	180 mL	21,000 / 21,000	50,380 / 50,380
Fixed-angle JA-20.1	BK342095	480 mL	20,000 / 20,000	51,520 / 51,520
Fixed-angle JA-20	BK334831	400 mL	20,000 / 20,000	48,380 / 48,380
Fixed-angle JA-18.1	BK347824	43.2 mL	18,000 / 18,000	42,090 / 42,090
 Fixed-angle JA-18	BK369679	1 liter	18,000 / 18,000	47,900 / 47,900
 Fixed-angle JA-17	BK369691	700 mL	17,000 / 17,000	39,810 / 39,810
Fixed-angle JLA-16.250	BK363934	1.5 liters	16,000 / 16,000	38,420 / 38,420
 Fixed-angle JLA-16.250 Dual-Locking Lid	BK363930	1.5 liters	16,000 / 16,000	38,420 / 38,420
JA-14.50	BKB88555	800 mL	14,000 / 14,000	35,050 / 35,050
 JA-14.50 Dual-Locking Lid	BKB88554	800 mL	14,000 / 14,000	35,050 / 35,050
 Fixed-angle JA-14	BK339247	1.5 liters	14,000 / 14,000	30,070 / 30,070
Fixed-angle JA-12	BK360993	600 mL	12,000 / 12,000	23,220 / 23,220

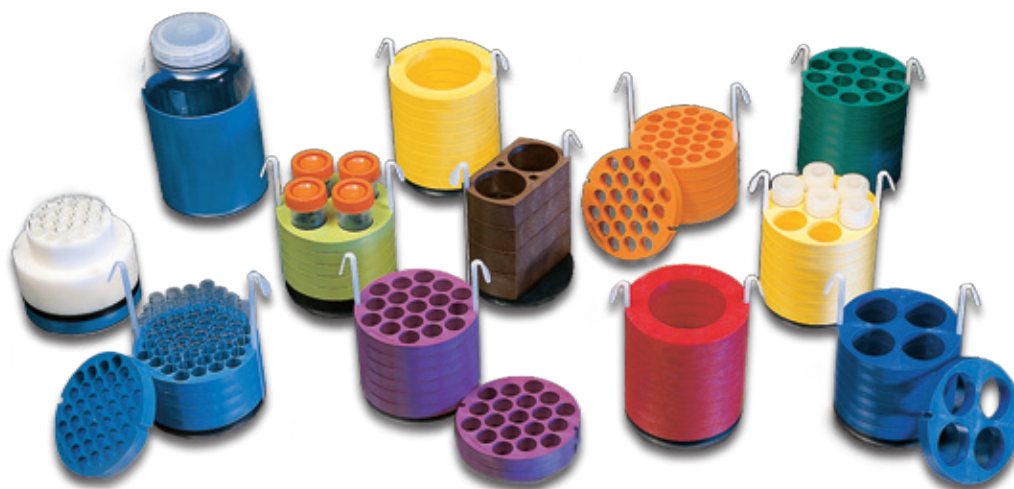
CENTRIFUGE AND ROTOR OPTIONS	US VWR NUMBER	MAXIMUM CAPACITY	MAXIMUM SPEED, RPM	MAXIMUM RCF, x g
 Fixed-angle JA-12 Dual-Locking Lid	<b>BK360992</b>	600 mL	12,000 / 12,000	23,220 / 23,220
Fixed-angle JA-10	<b>BK369687</b>	3 liters	10,000 / 10,000	17,700 / 17,700
 Fixed-angle JLA-10.500 <sup>†</sup>	<b>BK369681</b>	3 liters	10,000 / NA	18,590 / NA
Fixed-angle JLA-9.1000	<b>BK366754</b>	4 liters	9,000 / 9,000	16,780 / 16,780
 Fixed-angle JLA-8.1000 <sup>††</sup>	<b>BK363688</b>	6 liters	8,000 / NA	15,970 / NA
Swinging-bucket JS-24.38	<b>BK360743</b>	231 mL	10,000 / 24,000	18,030 / 103,860
Swinging-bucket JS-24.15	<b>BK362396</b>	90 mL	10,000 / 24,000	19,190 / 110,510
Swinging-bucket JS-13.1	<b>BK346963</b>	300 mL	13,000 / 13,000	26,500 / 26,500
Swinging-bucket JS-7.5	<b>BK336380</b>	1 liter	7,500 / 7,500	10,400 / 10,400
 Swinging-bucket JS-5.3 AllSpin <sup>†</sup>	<b>BK368690</b>	2 liters	5,300 / NA	6,870 / NA
 Swinging-bucket JS-4.3 <sup>††</sup>	<b>BK362734</b>	3 liters	4,300 / NA	4,220 / NA
 Swinging-bucket JS-4.0 <sup>†</sup>	<b>BK339086</b>	4 x 1 liter	4,000 / NA	4,050 / NA
<b>Avanti J-E High-Performance &amp; High-Capacity Centrifuge</b>				
Fixed-angle JA-25.50	<b>BK363055</b>	400 mL	21,000	53,300
Fixed-angle JA-25.50 Dual-Locking Lid	<b>BK363058</b>	400 mL	21,000	53,300
Fixed-angle JA-21	<b>BK334845</b>	180 mL	21,000	50,400
Fixed-angle JA-20.1	<b>BK342095</b>	480 mL	20,000	51,500
Fixed-angle JA-20	<b>BK334831</b>	400 mL	20,000	48,400
 Fixed-angle JA-18	<b>BK369679</b>	1 liter	16,000	37,800
 Fixed-angle JA-17	<b>BK369691</b>	700 mL	17,000	39,800
Fixed-angle JLA-16.250	<b>BK363934</b>	1.5 liters	16,000	38,400
 Fixed-angle JLA-16.250 Dual-Locking Lid	<b>BK363930</b>	1.5 liters	16,000	38,400
JA-14.50	<b>BKB88555</b>	800 mL	14,000	35,000
 JA-14.50 Dual-Locking Lid	<b>BKB88554</b>	800 mL	14,000	35,000
 Fixed-angle JA-14	<b>BK339247</b>	1.5 liters	14,000	30,100
Fixed-angle JA-12	<b>BK360993</b>	600 mL	12,000	23,200
 Fixed-angle JA-12 Dual-Locking Lid	<b>BK360992</b>	600 mL	12,000	23,200
Fixed-angle JA-10	<b>BK369687</b>	3 liters	10,000	17,700
 Fixed-angle JLA-10.500 <sup>†</sup>	<b>BK369681</b>	3 liters	10,000	18,600
Fixed-angle JLA-9.1000	<b>BK366754</b>	4 liters	6,300	8,230
Swinging-bucket JS-13.1	<b>BK346963</b>	300 mL	13,000	26,500
 Swinging-bucket JS-5.3 AllSpin <sup>†</sup>	<b>BK368690</b>	2 liters	5,300	6,130
<b>Avanti J-15 Benchtop Centrifuge Series</b>				
 JS-4.750	<b>76102-916</b>	4 x 750 mL	4,550	4,820

CENTRIFUGE AND ROTOR OPTIONS	US VWR NUMBER	MAXIMUM CAPACITY	MAXIMUM SPEED, RPM	MAXIMUM RCF, x g
JS-4.750 $\mu$	<b>76102-918</b>	4 x 4 Standard-well Plates	4,450***	4,060***
<b>BIO</b> JA-10.100	<b>76102-914</b>	6 x 100 mL	10,200	11,420
<b>J6-MI High-Capacity Centrifuge</b>				
<b>BIO</b> Swinging-bucket JS-4.2A ARIES <sup>†</sup>	<b>BK366695</b>	6 x 1 liter	4,200	5,020
<b>BIO</b> Swinging-bucket JS-4.2 <sup>‡</sup>	<b>BK339080</b>	6 x 1 liter	4,200	5,020
<b>BIO</b> Swinging-bucket JS-4.0 <sup>‡</sup>	<b>BK339086</b>	4 x 1 liter	4,000	4,050
<b>BIO</b> Swinging-bucket JS-3.0 <sup>‡</sup>	<b>BK339081</b>	6 x 1 liter	3,000	2,560
Swinging-bucket JS-4.2SMA ARIES	<b>BK366670</b>	6 x blood bags	4,200	4,900
Swinging-bucket JS-4.2SM	<b>BK348394</b>	6 x blood bags	4,200	4,900

- All other trademarks are the property of their respective owners.
- \* Maximum RCF shown are for the Allegra X-15R.
- \*\* Maximum RCF and speeds shown on Allegra X-30 Series rotors are obtained with the refrigerated Allegra X-30R.
- \*\*\* Maximum speed and g-force are achieved when using this rotor (1 to 3 stacked plates) in the Avanti J-15R.
- † Rotor is BioCertified when used in conjunction with Bucket Covers or AeroSeal Covers
- ‡ Rotor is BioCertified when used with Aerosolve Canisters.
- ‡‡ Rotor is BioCertified when used with 1 L container (not covers).
- BIO** BioCertified is a term used to describe our products which have been tested and validated to demonstrate containment of microbiological aerosols by an independent, third-party facility. Improper use or maintenance may affect seal integrity and, thus, containment.

## ROTOR ACCESSORIES

Beckman Coulter adapters, AeroSeal covers and other accessories bring added utility and safety to the J6 rotor line. Eleven color-coded Multi-Disc adapters fit inside the J6's swinging-buckets, accommodating tube and bottle diameters ranging from 10 mm to 98 mm. The adapters are autoclavable and can serve as handy storage racks. Special rubber bases are shaped to support individual tubes/bottles, and can be obtained for both conical and round-bottom shapes. Special AeroSeal covers work with swinging-buckets, using an O-ring seal designed to protect against biohazardous aerosol emission. Blood bag cups support blood bags of all sizes and shapes.





## BOTTLES, ROTORS, PACKAGES AND ACCESSORIES FOR AVANTI CENTRIFUGES

US VWR NUMBER	DESCRIPTION
76554-104	BOTTLE POLYPROPYLENE 1L ASM
76554-116	BOTTLE POLYCARBONATE 1L ASM
76554-102	CAP CLOSURE AND PLUG ASM PK2
76554-118	CAP CLOSURE PPS PK6
76554-110	PLUG ASM AUTOVENT PK2
76554-106	ROTOR JLA-12.500 FIXED-ANGLE

US VWR NUMBER	DESCRIPTION
76554-108	KIT ADAPTER 1000ML BOTTLE TORQUE
76554-100	KIT JLA-8.1000 ROTOR PKG
76554-112	ROTOR PACKAGE JLA-9.1000 C31597
76554-114	ROTOR PACKAGE JLA-9.1000 C31600
76554-120	ROTOR PACKAGE JLA-8.1000

## CENTRIFUGE BOTTLE LINERS & TUBES

### HarvestLine Bottle Liners

Safe, efficient workflows are as critical to your study as quality samples. Now you can harvest high-quality samples in fewer steps from prep to cleanup. With new HarvestLine sterile bottle liners, optimized speed, safety and pelleting efficiency are in the bag.

#### Accelerate workflows

- Achieve maximum sample yield
- Minimize non-value-added tasks e.g., bottle cleaning, autoclaving, scraping
- Expedite freeze/thaw lysing

#### Optimize lab safety and efficiency

- Prevent contamination
- Reduce exposure to potentially hazardous biologics
- Reduce repetitive motions
- Prevent liquid spillage
- Reduce needed storage space



### 1 L HARVESTLINE LINERS

US VWR NUMBER	DESCRIPTION	MATERIAL
<b>LINERS</b>		
76292-060	1 L HarvestLine System Liner, qty 6 (non-sterile)	Polyetherurethane, USP 23 Class VI
76292-062	1 L HarvestLine System Liner, qty 6 (sterile w/peel pack)	Polyetherurethane, USP 23 Class VI
BK369256	1 L HarvestLine System Liner, qty 120 (non-sterile)	Polyetherurethane, USP 23 Class VI
<b>COMPATIBLE ROTORS</b>		
BK363688	JLA-8.1000 Rotor - 6 x 1 L; 8,000 RPM; 15,970 x g	--
BK366754	JLA-9.1000 Rotor - 4 x 1 L; 9,000 RPM; 16,800 x g	--
<b>ACCESSORIES</b>		
76292-132	1 L HarvestLine Kit (includes rack and funnel)	--

# CERTIFIED FREE AND STERILE ULTRACENTRIFUGE TUBES

Whether you are helping to solve complex biological problems, investigating the causes of diseases or finding potential new cures, protecting your sample from degradation and contamination during your study is paramount. We can help you optimize sample protection when it matters most.



## CERTIFIED FREE

**Certified Free tubes exhibit no detectable DNA, DNase, RNase, PCR inhibitors, or endotoxins.\***

Ideal for Genomics, Exosomes, and Proteomics workflows

- Prevents sample degradation and contamination
- Double-bagged to prevent contamination during cleanroom transfer
- Improve QC data quality

*\*Based on sample results below detectable limits.*

## CERTIFIED FREE + STERILE

**Beckman sterile ultracentrifuge tubes are sterilized via ethylene oxide.**

Ideal for Protein Prep and Virus Purification workflows

- Includes all advantages of being certified free
- Pre-sterilized **ready-to-use** for improved workflow efficiency
- Eliminate need for developing sterilization protocol
- Packaged in workflow-based quantities
- Sterilized and packaged compliant with ISO 11135 and 11607

Maximize consistency.  
Prevent yield loss.  
Ready-to-go, right out of the bag.



## ORDERING INFORMATION

TUBE TYPE	NOMINAL CAPACITY (ML)	NOMINAL SIZE (MM)	US VWR NUMBER BECKMAN STANDARD	US VWR NUMBER CERTIFIED FREE	US VWR NUMBER CERTIFIED FREE + STERILE	COMPATIBLE ROTORS
Ultra-Clear Open-Top Round-Bottom	17	16x102	<b>76335-418</b>	<b>76335-616</b>	<b>76335-712</b>	SW 32.1 Ti, SW 28.1
Polypropylene Open-Top Round-Bottom	4	11x60	<b>76335-422</b>	<b>76335-626</b>	<b>76335-722</b>	SW 60 Ti
Polypropylene Quick Seal Round-Bottom	100	38x102	<b>76335-404</b>	<b>76335-630</b>	<b>76335-726</b>	Type 45 Ti, JA-18



Ultra-Clear  
Open-Top  
Round-Bottom



Polypropylene  
Open-Top  
Round-Bottom



Polypropylene  
Quick Seal  
Round-Bottom

## ULTRACENTRIFUGE TUBES

Whether you are helping to solve complex biological problems, investigating the causes of diseases or finding potential new cures, you need consumables that meet your workflow needs.

Consumables from Beckman Coulter are available in a variety of sizes and materials.

A number of factors go into selecting the right tube or bottles for an application, including:

- Separation technique
- Sample type
- Solvent or gradient media
- Disposable or reusable format
- Transparent, translucent or opaque
- Diaphanous tubes designed to be sliced or punctured
- Autoclavable tubes that can be sterilized and reused
- Tubes resistant to a variety of chemical compounds

Always refer to Beckman Coulter ultracentrifuge rotor instruction manual for the list of compatible rotors.



US VWR NUMBER	DESCRIPTION
76335-362	BOTTLE AY PC 1 X 3-1/2 (BOX-6)
76335-364	TUBES 1 X 3-1/4 OPTISEAL (BELL) BOX 56
76335-366	LINERS PE 2.4ML (BOX-100)
76335-368	TUBES PC TK WALL 11X34MM (BOX-100)
76335-370	BOTTLE AY PC 1-1/2 X 4 (BOX-6)
76335-372	BOTTLE AY PP 2-3/8 X 4-3/4
76335-376	TUBES PC TK WALL 8X34MM (BOX-100)
76335-378	TUBES PC TK WALL 7X20MM (BOX-100)
76335-380	TUBES PC 1 X 3-1/2 (BOX-25)
76335-382	TUBES 1/2X2-1/4 (13X56) PC TW BOX50
76335-388	LINERS PE 3.5ML (BOX-100)
76335-818	TUBES PC TK WALL 13X51MM (BOX-25)
76335-392	TUBES PP 9/16 X 3-3/4 (BOX-50)
76335-394	TUBES PP 5X20MM (BOX-100)
76335-396	BOTTLE & CAP AY PC 5/8 X 3 (BOX 6)
76335-398	TUBES PP OT 1/2 X 2 (BOX-50)
76335-400	TUBES UC PK100
76335-402	TUBES PP TK WALL 7X20MM (BOX-100)
76335-404	TUBES QS PP 1-1/2 X 4 (BOX-25)
76335-406	TUBES QS PP 5/8 X 3 (BOX-50)
76335-408	TUBES PC 5/8 X 3 (BOX-25)
76335-410	BOTTLES PC 1-1/2 X 4 70 ML BX6
76335-412	TUBE OPTISEAL PP 4.7ML 13X48MM BX56
76335-414	TUBES PC 1/2 X 2-1/2 (BOX-25)
76335-416	BOTTLES PC 1 X 3-1/2 (BOX-6)
76335-420	OPTISEAL TUBES 1/2X2 (BOX56)

US VWR NUMBER	DESCRIPTION
76335-422	TUBES PP 7/16 X 2-3/8 (BOX-50)
76335-424	TUBES PC 5/16 X 2 (BOX-25)
76335-430	TUBES QS PP 11X32MM (BOX-50)
76335-432	TUBES PP 1 X 3-1/2 (BOX-25)
76335-434	TUBES UC TN WALL 11X34MM (BOX-50)
76335-436	TUBES QS PP 1/2 X 2 (BOX-50)
76335-438	TUBES 5/8X2-3/8 BELL OPTISEAL(BOX-56)
76335-440	OPTISEAL TUBES 1X3-1/2 (BOX56)
76335-442	TUBES PP TK WALL 13X51MM (BX25)
76335-444	TUBES CP TK WALL 7X20MM (BOX-100)
76335-636	TUBE KIT ROTOR QS 1 X 3-1/2 (KIT)
76335-638	TUBES QS PP BELL 1/2X2-1/2 BOX-50
76335-640	TUBES PP 5/8 X 4 (BOX-50)
76335-642	TUBES 1/2 INCH OPTISEAL (TLN100) BOX56
76335-644	KIT 1 INCH OPTISEAL TUBES (KIT)
76335-646	TUBES UC 3/16 X 1-5/8 (BOX-50)
76335-648	OPTISEAL TUBES 5/8X2-3/4 BX56
76335-650	BOTTLES PC 5/8 X 3 (BOX-25)
76335-652	TUBES PP TK WALL 11X34MM (BOX-100)
76335-654	TUBES QS PP BELL 5/8X2-1/4 BOX-50
76335-656	QS TUBES 5.1ML (13X51) PP BT BOX 50
76335-658	TUBES PE 5 X 20MM (BOX-100)
76335-446	TUBES QS PP BELL 1 X 3-1/4 BOX-50
76335-448	TUBES PC 7/16 X 2-3/8 (BOX-25)
76335-450	TUBES QS UC 5/8 X 3 (BOX-50)
76335-452	TUBES PP TN WALL 11X34MM (BOX-50)

US VWR NUMBER	DESCRIPTION
76335-454	BOTTLES PP 2-3/8 X 4-3/4 (BOX-6)
76335-456	TUBES PP 1/2 X 2-1/2 (BOX-25)
76335-458	TUBE KIT QUICK SEAL 6.5 ML/13X64M (KIT)
76335-460	TUBE KIT ROTOR QS 5/8 X 3 (KIT)
76335-462	TUBES PP 5/8 X 3 (BOX-25)
76335-464	TUBES QS PP BELL 1X1-1/2 (BOX-50)
76335-466	TUBES QS PP BELL 1/2 X 1 (BOX-50)
76335-468	TUBE KIT ROTOR QS 1-1/2 X 4 (KIT)
76335-470	TUBES PP 1 X 3-1/4 (BOX-50)
76335-472	TUBES QS UC 1-1/2 X 4 (BOX-25)
76335-474	KIT 5/8 INCH OPTISEAL TUBES (KIT)
76335-476	TUBES QS PP 5/8 X 1-1/2 (BOX-50)
76335-478	TUBES PP 5/8 X 3 (BOX-50)
76335-480	TUBES UC 5/16X 1-15/16 (BOX-50)
76335-482	TUBE KIT QUICKSEAL (KIT)
76335-484	TUBES UC 5/8 X 3 (BOX-50)
76335-660	TUBES PC 1-1/2 X 4 (BOX-25)
76335-662	TUBES 1/2X2-1/4 (13X56) PP TW BX50
76335-664	TUBE KIT ROTOR OPEN TOP 5/8 X 3(KIT)
76335-666	TUBES QS PP BELL 5/8X2-5/8 BOX-50
76335-668	TUBES QS PP 13 X 32MM (BOX-50)
76335-670	TUBES PP KON 9/16 X 3-1/2 (PKG-50)
76335-672	BOTTLE/CAP AY PC 70ML (BOX-6)
76335-674	TUBES PP 5/8 X 3 3/4 (PKG OF 50)
76335-676	BOTTLE/CAP AY PC 1 X 3 1/2 (BOX6)
76335-678	TUBES PP 7/16 X 2-3/8 (BOX-25)
76335-680	TUBE KIT OPTISEAL (KIT)
76335-682	TUBES QS PP BELL 5/8X1-3/4 BOX-50
76335-684	TUBE KIT OPTISEAL (KIT) 2
76335-552	G-MAX KIT 15ML 1 QTY BX50
76335-554	TUBE KIT OPTISEAL (KIT)
76335-556	LINERS 3.5ML (BOX-50)
76335-558	TUBE KIT ROTOR OPEN TOP 1-1/2 X 4 (KIT)
76335-560	TUBE KIT OPTISEAL (KIT) 3
76335-562	KIT 1/2 INCH BELL OPTISEAL TUBES(KIT)
76335-564	TUBES PP 5/8 X 2-1/2 (BOX-25)
76335-566	TUBES UC 1-1/2 X 4 (BOX-25)
76335-802	TUBE KIT QS TY-50.4TI (KIT)
76335-804	QS G-MAX TUBES 2.0 ML BX50
76335-806	TUBE KIT OPEN TOP 1 X 3-1/2 (KIT)
76335-808	TUBES PP TK WALL 8X34MM (BOX-100)
76335-686	TUBES PP 1/2 X 2-1/2 (BOX-50)
76335-688	TUBES QS PP 9/16 X 1-7/8 (BOX-50)
76335-690	TUBES QS KON 1 X 3-1/4 (BOX-50)
76335-486	TUBES PP 1-1/2 X 4 (BOX-25)
76335-488	TUBES QS PP BELL 1X2-1/2 (BOX-50)
76335-490	TUBE SS 1 X 3-1/2
76335-492	TUBES QS PP BELL 5/16 X 2 (BOX-50)

US VWR NUMBER	DESCRIPTION
76335-494	TUBES PP 1-1/2 X 4 (BOX-25) 2
76335-496	TUBES QS PP 1/2 X 1-1/2 (PKG-50)
76335-498	TUBES PP KONICAL 1 X 3 (PKG-50)
76335-500	TUBES QS UC 1/2 X 2-1/2 (BOX-50)
76335-502	TUBES QS UC 1 X 2-1/2 (BOX-50)
76335-504	TUBES UC 1/2 X 1-5/8 (BOX-50)
76335-506	TUBE KIT ROTOR QS 5/16 X 2(KIT)
76335-508	QS G-MAX KT 3.5ML QTY 50
76335-510	TUBES QS UC 1/2 X 2 (BOX-50)
76335-512	G-MAX KIT 4.2ML 5/8" QTY 50
76335-514	TUBES QS PP 9/16 X 1 (BOX-50)
76335-516	TUBE KIT ROTOR OPEN TOP 1 X 3-1/4(KIT)
76335-518	TUBES QS PP 11X25MM (BOX-50)
76335-520	TUBES PP KON 7/16 X 1-3/8 (BOX-50)
76335-522	TUBE KIT QUICKSEAL (KIT) 2
76335-524	TUBES PP KONICAL 5/8 X 4 (BOX-50)
76335-526	TUBES QS KON 9/16 X 3-1/2 (BOX-50)
76335-528	TUBES PP KONICAL 1/2 X 2 (BOX-50)
76335-530	TUBES PC 1/2 X 3-1/2 (BOX-25)
76335-532	TUBE KIT OPEN-TOP 5/16 X 2(KIT)
76335-534	TUBES QS KON 1 X 1-1/2 (PKG-50)
76335-536	TUBE KIT QUICKSEAL (KIT) 3
76335-538	G-MAX KIT 2ML 1/2 BX50
76335-540	TUBES QS KON 7/16 X 1-3/8 (BOX-50)
76335-542	TUBES QS UC 1 X 1-1/2 (BOX-50)
76335-544	KIT TLN-100 OPTISEAL TUBES (KIT)
76335-546	TUBES PP 1 X 3 3/4 ML (BOX-50)
76335-548	TUBES QS KON 9/16 X 1-7/8 (BOX-50)
76335-550	G-MAX KIT 15ML 1 BX50
76335-574	TUBES QS PP 5/8 X 4 (BOX-50)
76335-576	QS G-MAX KIT 5.1ML 100TI QTY 50
76335-578	G-MAX KIT 6.3ML 5/8" QTY 50
76335-580	G-MAX KIT 2ML 1/2" QTY 50
76335-586	G-MAX KIT 27ML 1" QTY 50
76335-692	TUBES QS KON 7/16 X 2-3/8 (BOX-50)
76335-694	G-MAX KIT 2ML 1/2" QTY 50.
76335-696	G-MAX KIT 6.3ML 5/8" QTY 50.
76335-698	G-MAX KIT 8ML 5/8" QTY 50
76335-588	LINERS PE 7ML LARGE OPEN (BOX-100)
76335-590	TUBES QS KONICAL 5/8 X 4 (PKG-50)
76335-592	TUBES PP 1/2 X 3-1/2 (BOX-25)
76335-594	G-MAX KIT 2ML 7/16" QTY 50
76335-598	G-MAX KIT 2ML 1/2"QTY 50
76335-602	STARTER KIT QS 1 (KIT)
76335-604	TUBES PP 1/2 X 3-1/2 (BOX-50)

# TUBES & BOTTLES

## A Quick-Reference Chart to Tube Materials and Their Properties

Property	Thinwall Polypropylene	Thickwall Polypropylene	Ultra-Clear	Polycarbonate	Polypropylene	Polyethylene	Cellulose Propionate
Optical	transparent	translucent	transparent	transparent	transparent/translucent	transparent/translucent	transparent
Autoclavable	yes	yes	no	yes**	yes	no	no
Puncturable	yes	no	yes	no	no	yes	no
Sliceable	yes	no*	yes	no	no*	no	no*
Reusable***	no	yes	no	yes	yes	yes	no
Acids (dilute or weak)	S	S	S	M	S	S	S
Acids (strong)	U	S	U	U	S	S	U
Alcohols (aliphatic)	U	S	U	U	S	S	U
Aldehydes	M	M	S	M	M	S	U
Bases	S	S	U	U	S	S	U
Esters	U	M	U	U	M	S	M
Hydrocarbons (aliphatic)	U	M	U	U	S	U	S
Hydrocarbons (aromatic and halogenated)	U	U	U	U	M	M	S
Ketones	U	M	U	U	M	M	U
Oxidizing Agents (strong)	U	U	U	M	M	M	M
Salts	S	S	M	M	S	S	S

S = satisfactory resistance M = marginal resistance U = unsatisfactory resistance

\* Polypropylene, polycarbonate, and cellulose propionate tubes with diameters of 5 to 13 mm may be sliced using the CentriTube Slicer (PN 347960) and appropriate adapter plate.

\*\* Tube life will be significantly reduced by autoclaving.

\*\*\* Inspect all tubes for cracking, crazing, stretching, or other damage. Do not reuse tubes that have these defects.

Note: This information has been consolidated from a number of sources and is provided only as a guide to the selection of tube materials. Soak tests at 1g (at 20°C) established the data for most of the materials; reactions may vary under the stress of centrifugation, or with extended contact or temperature variations. To prevent failure and loss of valuable sample, ALWAYS TEST SOLUTIONS UNDER OPERATING CONDITIONS BEFORE USE.

Warning: Do not use flammable substances in or near an operating centrifuge.

## General Filling and Sealing Requirements for Tubes and Bottles

	Tube or Bottle	Swinging-Bucket Rotors	Fixed-Angle Rotors
Polypropylene	Thinwall tubes	Within 2 to 3 mm of top	Full with cap
	Thickwall tubes	At least 1/2 full	1/2 full to max. capless level or full with cap
	Quick-Seal tubes	Full and heat-sealed	Full and heat-sealed
	Bottles	Min. to max. (see rotor manual) with screw-on cap or cap assembly	1/2 full to max. (see rotor manual) with screw-on cap assembly
Ultra-Clear	Open-Top tubes	Within 2 to 3 mm of top	Full with cap
	Quick-Seal tubes	Not used	Full and heat-sealed
Polycarbonate	Thickwall tubes	At least 1/2 full	1/2 full capless level or full with cap or cap assembly
	Bottles	At least 1/2 full	Min. to max. (see rotor manual) with screw-on cap or cap assembly
Stainless Steel	Tubes	Any level	Any level with cap or cap assembly
Polypropylene	Tubes and bottles	At least 1/2 full	1/2 to max. capless level or full with cap or cap assembly
Polyethylene	Tubes	At least 1/2 full	1/2 to max. capless level or full with cap or cap assembly
Polytetrafluoroethylene (Teflon)	Tubes and bottles	At least 1/2 full	1/2 full to max. capless level or full with cap
Polyphenylsulfone (PPSU)	Container	At least 1/2 full	N/A





## Customer Technical Support

Beckman Coulter Life Sciences simplifies and automates your laboratory processes. From consultation in choosing products and services, through installation, training, and support, we are committed to making your laboratory the most efficient and cost-effective operation it can be. We can bring your lab the most streamlined, intelligent, and customer-focused service in the industry.

We offers a variety of system support options, including customer call centers for telephone technical assistance, 24-hour-a-day online access to a wide array of helpful information and on-site hands-on support provided by a qualified field engineer.

To meet the various needs of your laboratory, Beckman Coulter Life Sciences also offers a wide range of support agreements designed to meet your specific coverage and financial requirements. These agreements are structured to provide you with various levels of support for hardware, software, training, regulatory compliance, product upgrade pathways and privileged call center phone entitlements.

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0324 Lit. No. 020251W

IVD: In Vitro Diagnostics

**BIO** BioCertified is a term used to describe our products which have been tested and validated to demonstrate containment of microbiological aerosols by an independent, third-party facility (Health Protection Agency, Porton Down, UK or USAMRIID, Ft. Detrick, MD, USA). Also, several rotors have been certified by TÜV NORD CERT GmbH, Große Bahnstraße 31, D-22525 Hamburg, Germany Improper use or maintenance may affect seal integrity and, thus, containment.

BioSafe and BioSafety are terms intended to describe the enhanced biocontainment features of our products.

**BIOE** BioEnhanced is a term intended to describe our products' enhanced level of biocontainment by design.

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