AVANTI J-15 SERIES

THE RELIABILITY AND PERFORMANCE YOU TRUST

BRILLIANCE
at every turn.

BECKMAN COULTER
Life Sciences

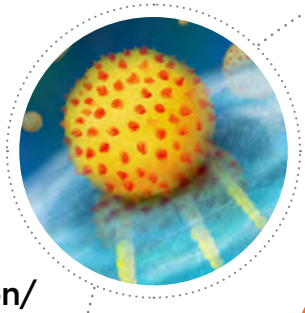
FROM GENERAL CELL CULTURE PREPARATIONS TO PURIFIED END PRODUCT APPLICATIONS

THE NEW AVANTI J-15 SERIES IS PART OF A NEW FAMILY OF LIFE SCIENCE EQUIPMENT THAT PROVIDES THE EXCEPTIONAL PERFORMANCE YOU EXPECT FROM BECKMAN COULTER.

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

Tissue Culture

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



Transfection/ Transduction

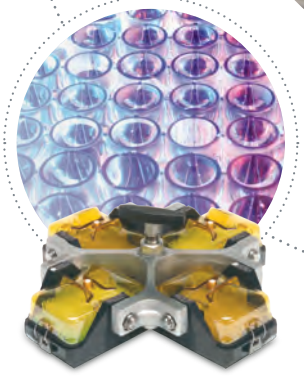
Centrifugal boosts, or spin-fection, increases transduction and transfection rate up to 10 fold§

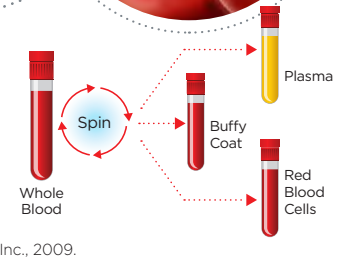
Nucleic Acid Purification

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

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¥ or grow cells in a plate format

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

¥ 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).

ENHANCED CONTROL OF SAMPLE, TIME AND WORKFLOW

ULTRAHarmonic Technology

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.

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

Durable and Easy-to-Clean, Innovative Design

A hallmark of Beckman Coulter's life science equipment

Fast and Accurate Imbalance Detection

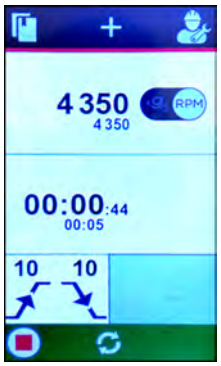
Early diagnostic eliminates false positives with hardware and software improvements

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

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.

ROTORS AVAILABLE

Swinging Bucket

JS-4.750

- Max RPM: 4,739 RPM
- Max RCF: 5,250 x g
- 3 liter Maximum Capacity
- BioSafe options
- Sample containers supported
  - Flasks
  - Tube range: 3 - 50mL
  - Bottles: 230 conical, 250, 500, 750mL
  - Aerosolve Canisters

JS-4.750µ

- Max RPM: 4,450 RPM
- Max RCF: 4,060 x g
- BioSafe options
- Plate Capacity
  - 16 single plates
  - 4 deep well

Fixed Angle

JA-10.100

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

Item No.	Item Description
B77580	Rotor Assembly, JS-4.750
B77584	Rotor Assembly, JA-10.100
B83980	Rotor Assembly, JS-4.750 Microplate Carriers

* Using the JS-4.750 rotor

INSTRUMENT AND ROTOR PACKAGES

Swinging Bucket

Avanti J-15 series swinging bucket packages

Includes benchtop centrifuge and JS-4.750 (4 x 750 mL) swinging bucket rotor.

Bottles are NOT included and can be ordered separately

Part Number	Description
C19399	Avanti J-15, IVD, Ventilated, 100-120 V, 50/60 Hz, Swinging Bucket Package
C19398	Avanti J-15R, IVD, Refrigerated, 120 V, 60 Hz, Swinging Bucket Package
C19400	Avanti J-15, Ventilated, 100-120 V, 50/60 Hz, Swinging Bucket Package
C19397	Avanti J-15R, Refrigerated, 120 V, 60 Hz, Swinging Bucket Package

- 4,750 RPM/5,250 x g RCF (J-15R 200-230V)
- 4,550RPM/4,820 x g RCF (J-15/R 120V)

Avanti J-15 series microplate packages

Includes benchtop centrifuge and JS-4.750µ microplate rotor (yoke with microplate carriers) , 4 microplate carriages

Microplates and microplate covers are NOT included and can be ordered separately.

Part Number	Description
C19405	Avanti J-15, IVD, Ventilated, 100-120 V, 50/60 Hz, Microplate Package
C19404	Avanti J-15R, IVD, Refrigerated, 120 V, 60 Hz, Microplate Package
C19406	Avanti J-15, Ventilated, 100-120 V, 50/60 Hz, Microplate Package
C19403	Avanti J-15R, Refrigerated, 120 V, 60 Hz, Microplate Package

- 4,450RPM/4,060 x g RCF (J-15R)
- 4,350RPM/3,880 x g RCF (J-15)

Avanti J-15 series cell culture packages

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).

Bucket covers and tubes/bottles are NOT included and can be ordered separately.

Part Number	Description
C19417	Avanti J-15, IVD, Ventilated, 100-120 V, 50/60 Hz, Cell Culture Package
C19416	Avanti J-15R, IVD, Refrigerated, 120 V, 60 Hz, Cell Culture Package
C19418	Avanti J-15, Ventilated, 100-120 V, 50/60 Hz, Cell Culture Package
C19415	Avanti J-15R, Refrigerated, 120 V, 60 Hz, Cell Culture Package

- 4,750 RPM/5,250 x g RCF (J-15R 200-230V)
- 4,550 RPM/4,820 x g RCF (J-15/R 120V)
- **Adapters:**
  - Holds 56 of 15 mL tubes
  - Holds 28 of 50 mL Tubes

INSTRUMENT AND ROTOR PACKAGES

Swinging Bucket

Avanti J-15 series biosafe packages

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.)

Tubes/bottles are NOT included and can be ordered separately.

Part Number	Description
C19411	Avanti J-15, IVD, Ventilated, 100-120 V, 50/60 Hz, BioSafe Package
C19410	Avanti J-15R, IVD, Refrigerated, 120 V, 60 Hz, BioSafe Package
C19412	Avanti J-15, Ventilated, 100-120 V, 50/60 Hz, BioSafe Package
C19409	Avanti J-15R, Refrigerated, 120 V, 60 Hz, BioSafe Package

- 4,750 RPM/5,250 x g RCF (J-15R 200-230V)
- 4,550 RPM/4820 x g RCF (J-15/R 120V)

Avanti J-15 series blood sample packages

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).

Bucket covers and tubes/bottles are NOT included and can be ordered separately.

Part Number	Description
C19423	Avanti J-15, IVD, Ventilated, 100-120 V, 50/60 Hz, Blood Sample Package
C19422	Avanti J-15R, IVD, Refrigerated, 120 V, 60 Hz, Blood Sample Package
C19424	Avanti J-15, Ventilated, 100-120 V, 50/60 Hz, Blood Sample Package
C19421	Avanti J-15R, Refrigerated, 120 V, 60 Hz, Blood Sample Package

- 120 - 13mm Blood Tubes
- 76 - 16mm Blood Tubes

Fixed Angle

Avanti J-15 series Fixed Angle packages

Includes benchtop centrifuge and BioCertified* JA-10.100 (6 x 100 mL) fixed angle rotor.

Adapters, tubes/bottles are NOT included and can be ordered separately.

Part Number	Description
C19393	Avanti J-15, IVD, Ventilated, 100-120 V, 50/60 Hz, Fixed Angle Package
C19392	Avanti J-15R, IVD, Refrigerated, 120 V, 60 Hz, Fixed Angle Package
C19394	Avanti J-15, Ventilated, 100-120 V, 50/60 Hz, Fixed Angle Package
C19391	Avanti J-15R, Refrigerated, 120 V, 60 Hz, Fixed Angle Package

- 600 mL Maximum Capacity
- 10,200 RPM 11,420 x g RCF
- Biosafety Lid

ROTOR ACCESSORIES

Swinging Bucket

Table 1: Additional Biosafety accessories for personal protection and sample protection

Part Number	Description
392805	JS-4.750 Tube-Bottle Bucket Covers (Set of 2)
393070	JS-4.750 Multi-well Plate Carrier Cover (Set of 2)
392804	JS-4.750 Replacement Tube-and-bottle bucket (set of 2)
392806	JS-4.750 Multi-well plate carrier (set of 2)
359481	JS-4.750 Aerosolve Canister (Set of 2)

Table 2: Modular Disk Adapters (polypropylene).

Color Code	Nom. Tube Vol. (mL)	Nom. Tube Dia. (mm)	Max. No. of Tubes per Adapter	Max. No. Tubes in Rotor	Adapter Part No.	
					Set of 2	Set of 4
blue	3 5	10 12	37	148	**359469**	**359148**
tan	3 & 5	13	30	120	**359478**	**359157**
orange	7 & 10	14	24	96	**359470**	**359149**
purple	12	16	19	76	**359471**	**359150**
green conical	15	18	14	56	**359472**	**359151**
green	15 & 20	18	14	56	**359473**	**359152**
lt. green conical	30 & 50	30	4	16	**359475**	**359154**
yellow	50	29	7	28	**359474**	**359153**
dk. blue	50	35	4	16	**359476**	**359155**

Table 3: Cell Culture Flask Adapters (EPDM)

Color Code	Flask Size (cm^2)	No. Flasks per Adapter	Part No. (Qty 2)
orange	75	1	**369292**
green	25	2	**369295**

Fixed Angle

Table 4: Bottle and Tube Adapters for the JA-10.100 Rotor[a]

Adapter Part Number (Set of 6)	Tube or Bottle Type[b]	Tube Dimensions (mm)	Nominal Tube Volume (mL)
392830	round-bottom tube or bottle	29 x 108	50
392268	conical tube	30 x 115	50
392823	bottle	18 x 107	15
392270	conical tube	17 x 120	15
392824	round-bottom bottle	16 x 82	10
344497[c]	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. 344497 fits in 392830.

COMPLIANCE AND TECHNICAL SUPPORT

- At Beckman Coulter, engineering , sales, support, training and service work together to offer comprehensive and extensive customer focused products.
- Expert service engineering team strives for “Fix It Right the First Time.”
- Certifications of Compliance.

	Part Number	Centrifuge Version
IVD [4]	B99515	AVANTI J-15R, 200-230 VAC, 50Hz
	C31547	AVANTI J-15R, 208-230 VAC, 60Hz
	B99517	AVANTI J-15R, 120 VAC, 60Hz
	C01994	AVANTI J-15
Non-IVD [5]	B99514	AVANTI J-15R, 200-230 VAC, 50Hz
	C31546	AVANTI J-15R, 208-230 VAC, 60Hz
	B99516	AVANTI J-15R, 120 VAC, 60Hz
	C01995	AVANTI J-15

Specification

Specification	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[1]	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[2]	> 55° C	> 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	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[3]	2	
	Altitude	Up to 2,000 meters	
Technology	Ultra Harmonic Technology	✔	✔

Providing 70 years of global leadership in centrifugation, Beckman Coulter Life Sciences designs, manufactures, sells, and services a complete line of centrifuge systems. By offering unique rotors and innovative bottles, tubes and accessories, coupled with advanced centrifugation software, Beckman Coulter delivers intelligent centrifugation solutions to laboratory science.

Learn more at **beckman.com**

[1] 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.
[2] If the system reaches this temperature, it will issue a diagnostic and shut down using max brake.
[3] Normally, only nonconductive pollution occurs. Occasionally, however, a temporary conductivity caused by condensation must be expected.
[4] In Vitro Diagnostics Use.
[5] General Use. Not intended or validated for use in the diagnosis of disease or other conditions.

BECKMAN COULTER Life Sciences

For Beckman Coulter's worldwide office locations and phone numbers, please visit Contact Us at **beckman.com**
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