Optima Series Tabletop Rotors

Accelerating discoveries.

At Beckman Coulter, total system design extends beyond instrumentation. Our Optima Series tabletop rotors are made to be the perfect complement for our Optima tabletop ultracentrifuges. Designed for researchers with smaller samples, Optima Series tabletop rotors handle sample volumes from as little as 175 µL up to 32.4 mL and race through run cycles at up to 150,000 rpm and greater than 1,000,000 × *g*.

Because we understand the rapidly changing world of life science research, every innovative component of our rotors has been created to meet your evolving demands—including lower k factors for faster separation of subcellular particles, proteins, viruses and more.

Accelerating your scientific discovery process starts with accelerating the rate at which you can perform. Our exclusive Optima Series rotors allow you to fine-tune your research for more rapid, accurate results.

Optima Series Tabletop Rotors

Extraordinary performance. Optimum safety.

Coupled with our innovative labware and accessories, Optima Series rotors offer extraordinary performance, ease, and functionality.

In addition, all Beckman Coulter instruments, rotors, and labware are designed, manufactured, and tested as a system. Multi-layered BioSafety* features, overspeed protection, and our exclusive Field Rotor Inspection Program ensure optimum safety and a full, useful lifetime for your investment.

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

BECKMAN COULTER
We're better together

For Beckman Coulter's worldwide office locations and phone numbers, please visit "Contact Us" at www.beckmancoulter.com

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Optima Series Tabletop Rotors

The perfect complement to our ultracentrifuges.

Brilliance
at every turn.

BECKMAN COULTER

DS-16530A

Capacity (mL)	Name/ Features	Part Number	Max Speed (rpm)	Max Force (x *g*)	k Factor	No. Tubes x Volume (mL)	Tube Vol. Range w/*g*-Max (mL)	
FIXED-ANGLE ROTORS								
16.0	**MLA-150**	393490	150,000	1,003,000	10.4[†]	8 x 2.0	1.0 - 2.0	
	Highest speed, for rapid differential sedimentation (pelleting) of small particles, such as subcellular organelles and viruses.							
20.0	**MLA-130**	367114	130,000	1,019,000	8.7	10 x 2.0	1.0 - 2.0	
	Rapid differential sedimentation (pelleting) of small particles, such as subcellular organelles and viruses.							
40.8	**TLA-110**	366735	110,000	657,000	13	8 x 5.1	1.5 - 5.1	
BIOC	Moderate volume differential sedimentation (pelleting) of subcellular organelles and viruses.							
18.0	**TLA-55**	366725	55,000	186,000	66	12 x 1.5	1.5	
BIOC	Rapid pelleting of nucleic acid precipitates in 1.5 mL tubes.							
194.4	**MLA-50**	A91774	50,000	233,000	92	6 x 32.4	4.0 - 32.4	
	Perfect for large volume applications. Unsurpassed combination of capacity and performance.							
SWINGING BUCKET ROTORS								
8.8	**TLS-55**	346134	55,000	259,000	50	4 x 2.2	0.2 - 2.2	
BIOC	RNA pelleting in 2-3 hours; subcellular fractionation and protein separations in sucrose gradients.							
20.0	**MLS-50**	367280	50,000	268,000	71	4 x 5.0	0.8 - 5.0	
	Rate-zonal separations of subcellular organelles; pelleting and isopycnic separations of RNA.							
NEAR-VERTICAL TUBE ROTORS								
9.6	**TLN-120**	357683	120,000	585,000	7	8 x 1.2	1.2	
	Highest speed, for plasmid DNA separations in 1.5 hours.							
31.2	**TLN-100**	357614	100,000	450,000	14	8 x 3.9	3.3 - 3.9	
	Highest speed and volume, for plasmid DNA separation in 4 hours.							
64.0	**MLN-80**	367100	80,000	389,000	20	8 x 8.0	4.2 - 8.0	
	High volume, for rapid, contamination-free isopycnic isolation of plasmid DNA.							

[†] When running full volume sample(s).

TABLETOP ROTOR SELECTION BY APPLICATION[†]

BIOSEPARATION	SPECIFIC APPLICATION	MLA-150	MLA-130	TLA-120.2	TLA-120.1	TLA-110	TLA-100.3	TLA-100	MLA-80	MLA-55	TLA-55	MLA-50	TLS-55	MLS-50	TLN-120	TLN-100	MLN-80
Separation of Subcellular Particles	Largest Volume for Pelleting					■			■	■		■		■			■
	Fastest Pelleting	■	■	■	■	■	■	■	■	■	■	■	■		■	■	■
	Largest Volume Rate-Zonal Separation					■			■	■		■		■		■	■
	Fastest Rate-Zonal Separation	■	■	■			■						■		■	■	■
Separation of Virus and Viral Particles	Largest Volume for Pelleting					■			■	■		■		■			■
	Fastest Pelleting	■	■	■	■	■	■	■	■	■	■	■	■		■	■	■
	Largest Volume Rate-Zonal Separation					■			■	■		■		■		■	■
	Fastest Rate-Zonal Separation	■	■	■			■						■		■	■	■
Rate-Zonal Separation of Proteins in Sucrose Gradient	Fastest Separation	■	■	■		■	■		■	■	■	■		■	■	■	■
	Largest Volume																
	Largest Number of Samples		■	■							■						
	Greatest Interband Distance					■			■	■		■	■	■			■
Separation of Lipoproteins	Fastest Differential Flotation				■			■									
	Largest Number for Differential Flotation				■			■									
	Largest Volume for Differential Flotation					■			■	■		■		■			■
	Greatest Interband Space					■			■	■		■	■	■			■
Pelleting RNA Through a CsCl Gradient	Fastest Separation	■	■	■		■	■		■	■			■	■	■	■	■
	Largest Volume					■			■	■		■		■		■	■
Isopycnic Separation of Plasmid DNA	Fastest Separation	■	■	■		■	■		■	■			■	■	■	■	■
	Greatest Interband Distance					■			■	■		■	■	■		■	■
	Largest Volume					■			■	■		■	■	■		■	■

[†] Selected rotor has the capability (x g, volume, labware) to accommodate the application, but may not be the most optimal/efficient choice for the specific application.

OPTIMA TABLETOP ULTRACENTRIFUGE ROTORS[††]

Rotor Type	Part Number	Max Speed (rpm)	Force at r max (x *g*)	k Factor	No. Tubes x Volume (mL)	Rotor Capacity (mL)	Tube Vol. Range w/ *g*-Max (mL)	MAX-XP	MAX-TL
FIXED-ANGLE ROTORS									
MLA-150	393490	150,000	1,003,000	10.4	8x2.0	16.0	1.0 - 2.0	■	
MLA-130	367114	130,000	1,019,000	8.7	10x2.0	20.0	1.0 - 2.0	■	
BIOC TLA-120.2	357656	120,000	627,000	8	10x2.0	20.0	1.0 - 2.0	■	■
TLA-120.1	357655	120,000	627,000	8	14x0.5	7.0	0.5	■	■
BIOC TLA-110	366735	110,000	657,000	13	8x5.1	40.8	1.5 - 5.1	■	■
TLA-100.3	349490	100,000	541,000	14	6x3.5	21.0	1.5 - 3.5	■	■
TLA-100	343837	100,000	436,000	7	20x0.2	4.0	0.2	■	■
MLA-80	367096	80,000	444,000	29	8x8.0	64.0	4.2 - 8.0	■	
MLA-55	A31459	55,000	287,000	53	8x13.5	108.0	2.0 - 13.5	■	
BIOC TLA-55	366725	55,000	186,000	66	12x1.5	18.0	1.5	■	■
MLA-50	A91774	50,000	233,000	92	6x32.4	194.4	4.0 - 32.4	■	

Rotor Type	Part Number	Max Speed (rpm)	Force at r max (x *g*)	k Factor	No. Tubes x Volume (mL)	Rotor Capacity (mL)	Tube Vol. Range w/ *g*-Max (mL)	MAX-XP	MAX-TL
SWINGING BUCKET ROTORS									
BIOC TLS-55	346134	55,000	259,000	50	4x2.2	8.8	0.2 - 2.2	■	■
MLS-50	367280	50,000	268,000	71	4x5.0	20.0	0.8 - 5.0	■	
NEAR-VERTICAL TUBE ROTORS									
TLN-120	357683	120,000	585,000	7	8x1.2	9.6	1.2	■	■
TLN-100	357614	100,000	450,000	14	8x3.9	31.2	3.3 - 3.9	■	■
MLN-80	367100	80,000	389,000	20	8x8.0	64.0	4.2 - 8.0	■	

[††] Maximum rotor speeds may differ between instrument models. For complete rotor specifications, available tubes, bottles and accessories, and required parts, refer to our Ultracentrifuges Catalog (BR-8101) available at www.beckmancentrifuges.com.

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 (Health Protection Agency, Porton Down, UK or USAMRIID, Ft. Detrick, MD, USA). Improper use or maintenance may affect seal integrity and, thus, containment.