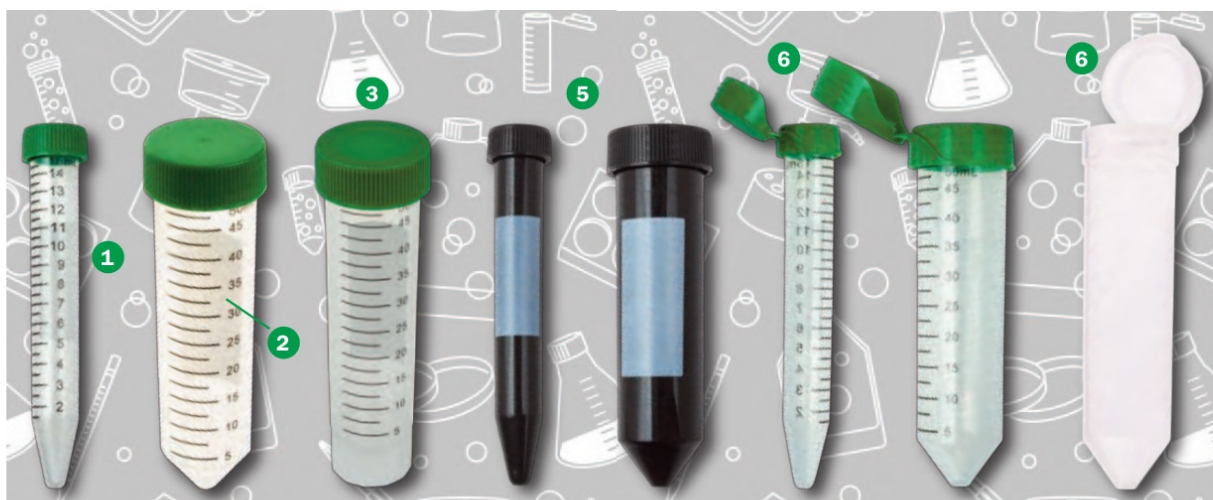


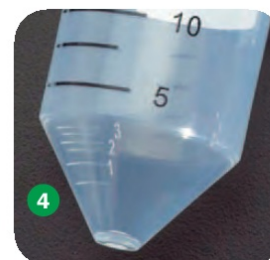
Centrifuge Tubes



Centrifuge Tubes are available with a variety of special features and packaging options. Please refer to the Centrifuge Tube Selection Guide below and pages 15 - 21 for additional information on tube options.

- Temperature range of -80°C to 120°C (polypropylene only)

- 1 Graduations are printed in bold easy-to-read black ink and are accurate to $\pm 2\%$
- 2 Large white marking area provides excellent contrast for identification
- 3 Easy to write on flat surface polyethylene (HDPE) caps feature integrated leak-proof seal
- 4 Tubes include graduations molded into the conical bottom, ideal for pellet viewing and small volume quantification
- 5 Black Centrifuge Tubes protect light sensitive compounds and eliminate the need to wrap tubes with aluminum foil
- 6 Ergonomic flip top cap is designed for single handed operation; Single piece Snap-Pop Lid also available (page 17)



Centrifuge Tube Selection Guide

Options listed below are for sterile, conical bottom, polypropylene centrifuge tubes unless otherwise noted.

TUBE DESCRIPTION	PAGE	15mL				50mL			
		Bag	Paper Rack	Foam Rack	Plastic Rack	Bag	Paper Rack	Foam Rack	Plastic Rack
Flat Top Screw Cap	15 - 16	229411	229410	229412	229418	229421	229420	229422	229428
Flip Top Screw Cap	15	229417	229416			229427	229426		
Snap-Pop Lid (Conical)	17	229496				229498			
Snap-Pop Lid (Self-Standing)	17	229497				229499			
Sure Cap	17	229401				229402			
Vented (Bio-Reaction) Cap	19	229471		229472		229475		229476	
Vented (Bio-Reaction) Cap - Self-Standing	19					229479			
Polystyrene (Sure Cap only)	17	229491							
Black Opaque	15	229431 229432				229433 229434			
Self-Standing	15					229430			

Additional options available for non-sterile centrifuge tubes, see page 15.

Centrifuge Tubes - Bag

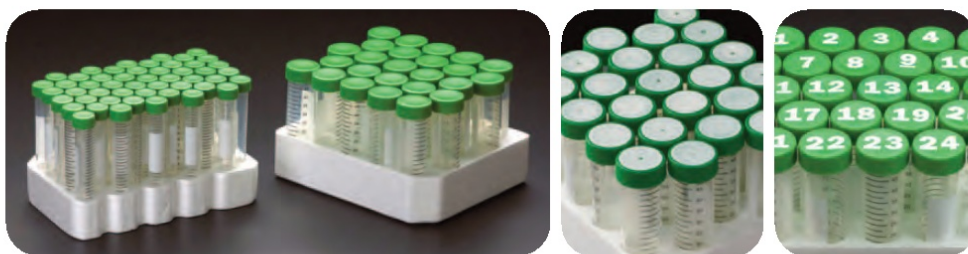


- Convenient zip-closure bag is a practical alternative to folding and taping opened bags
- Available in 15 & 50mL Conical Bottom, 50mL Self-Standing, 15 & 50mL Flip Top and 15 & 50mL Black tube options
- Easily refill reusable racks with tubes packed in bags

CENTRIFUGE TUBES - BAG			S, R/D F, NP, USP, A, PP		
Part No.	Product Description	Pack Description	Qty/ Case	Sterile (Y/N)	Max Force (RCF) g
229411	15mL Centrifuge Tube	25/Re-sealable Bag	500	Y	12000
229421	50mL Centrifuge Tube	25/Re-sealable Bag	500	Y	16000
229430	50mL Centrifuge Tube - Self-Standing	25/Re-sealable Bag	500	Y	6000
FLIP TOP CENTRIFUGE TUBES - BAG			S, R/D F, NP, USP, A, PP		
229417	15mL Centrifuge Tube, Flip Top Cap	25/Re-sealable Bag	500	Y	9400
229427	50mL Centrifuge Tube, Flip Top Cap	25/Re-sealable Bag	500	Y	9400
229425	50mL Centrifuge Tube, Flip Top Cap Only	25/Re-sealable Bag	1000	Y	NA
BLACK CENTRIFUGE TUBES - BAG			S, R/D F, NP, USP, A, PP		
229431	15mL Centrifuge Tube, Black	25/Re-sealable Bag	100	Y	12000
229432	15mL Centrifuge Tube, Black	25/Re-sealable Bag	500	Y	12000
229433	50mL Centrifuge Tube, Black	25/Re-sealable Bag	100	Y	16000
229434	50mL Centrifuge Tube, Black	25/Re-sealable Bag	500	Y	16000
CAP OR TUBE ONLY CENTRIFUGE TUBES - BAG			N, R/D F, NP, USP, A, PP		
229450	TUBE ONLY, 15mL Centrifuge Tube	500/Bag	500	N	12000
229451	CAP ONLY, 15mL Centrifuge Tube	500/Bag	500	N	NA
229452	TUBE & CAP, 15mL Centrifuge Tube & Cap	Tubes 500/Bag & Caps 500/Bag	500	N	12000
229453	CAP ONLY, 50mL Centrifuge Tube	500/Bag	500	N	NA
229454	TUBE ONLY, 50mL Centrifuge Tube	500/Bag	500	N	16000
229456	TUBE & CAP, 50mL Centrifuge Tube & Cap	Tubes 500/Bag & Caps 500/Bag	500	N	16000

Centrifuge Tubes - Foam Rack

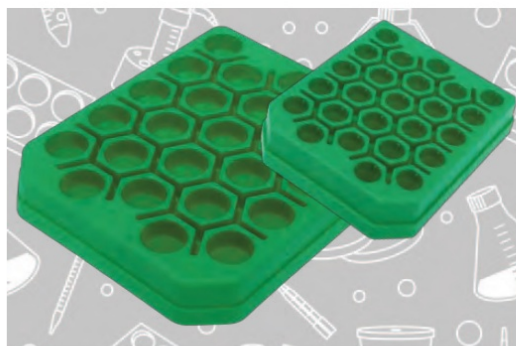
- Sturdy alternative to disposable paperboard racks
- Also available with printed marking spot and pre-numbered caps



CENTRIFUGE TUBES - FOAM RACK			S, R/D F, NP, USP, A, PP		
Part No.	Product Description	Pack Description	Qty/ Case	Sterile (Y/N)	Max Force (RCF) g
229412	15mL Centrifuge Tube	50/Foam Rack	300	Y	12000
229422	50mL Centrifuge Tube	25/Foam Rack	300	Y	16000
229423	50mL Centrifuge Tube, Marking Spot Cap	25/Foam Rack	300	Y	16000
229424	50mL Centrifuge Tube, Numbered Cap	25/Foam Rack	300	Y	16000

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Centrifuge Tubes - Plastic Rack



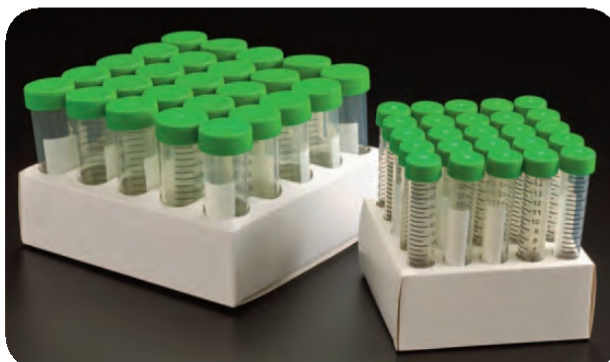
▲ Reusable/Recyclable Racks also available for purchase separately (Part No. 229419 & 229429)

- Plastic Racks are manufactured from polypropylene and are chemically resistant and autoclavable
- Durable racks are reusable and recyclable
- Design of the tray prevents racks from sticking/freezing to surfaces
- Widely spaced design catches drips and allows tubes to be retrieved more easily

CENTRIFUGE TUBES - PLASTIC RACK			R/D F, NP, USP, A, PP		
Part No.	Product Description	Pack Description	Qty/Case	Sterile (Y/N)	Max Force (RCF) g
229418	15mL Centrifuge Tube	25/Plastic Rack with 2 Racks/Bag	300	Y	12000
229428	50mL Centrifuge Tube	25/Plastic Rack	300	Y	16000
229419	PLASTIC RACK ONLY, 15mL Centrifuge Tube	5/Bag	5	N	NA
229429	PLASTIC RACK ONLY, 50mL Centrifuge Tube	5/Bag	5	N	NA

Centrifuge Tubes - Paperboard Rack

- Economical, recyclable alternative to disposable foam rack
- Available in 15 & 50mL Screw Cap and 15 & 50mL Flip Top Cap tube options
- Folds flat for recycling or disposal



CENTRIFUGE TUBES - PAPERBOARD RACK			R/D F, NP, USP, A, PP		
Part No.	Product Description	Pack Description	Qty/Case	Sterile (Y/N)	Max Force (RCF) g
229410	15mL Centrifuge Tube	25/Paperboard Rack with 2 Racks/Bag	500	Y	12000
229420	50mL Centrifuge Tube	25/Paperboard Rack	500	Y	16000
229455	50mL Centrifuge Tube	25/Paperboard Rack	500	N	16000
FLIP TOP CENTRIFUGE TUBES - PAPERBOARD RACK			S, R/D F, NP, USP, A, PP		
229416	15mL Centrifuge Tube, Flip Top Cap	25/Paperboard Rack with 2 Racks/Bag	500	Y	9400
229426	50mL Centrifuge Tube, Flip Top Cap	25/Paperboard Rack	500	Y	9400

NEW Snap-Pop Lid Centrifuge Tubes



- Easily open or seal the tube with one hand
- Audible 'Snap!' gives confidence that the tube is completely closed
- Elongated lip on attached cap prevents contact with tube which reduces cross contamination
- Ideal for sample storage, collection and experimental procedures
- Single-piece design is easy to use in the lab or the field
- Offers savings advantage versus traditional flip-top screw cap
- Available in conical and self-standing bottoms

SNAP-POP LID CENTRIFUGE TUBES CONICAL BOTTOM

S, R/D F, NP, A, PP

Part No.	Product Description	Pack Description	Qty/ Case	Max Force (RCF) g
229496	15mL Centrifuge Tube	50/Re-sealable Bag	500	5500
229498	50mL Centrifuge Tube	25/Re-sealable Bag	500	9000

SNAP-POP LID CENTRIFUGE TUBES SELF-STANDING

S, R/D F, NP, A, PP

229497	15mL Centrifuge Tube	50/Re-sealable Bag	500	1000
229499	50mL Centrifuge Tube	25/Re-sealable Bag	500	1000

Sure Cap Centrifuge Tubes

SURE CAP - POLYPROPYLENE & POLYSTYRENE TUBES

- Sure Cap with compressible liner creates a stable seal
- Available in 15 & 50mL **polypropylene** and 15mL **polystyrene** tube
- Polypropylene tubes have same great features as standard tube offering (see page 14)

SURE CAP - POLYSTYRENE TUBES

- Polystyrene tube is optically clear for easy viewing of sample
- Includes molded 15mL graduation line plus 0.5 and 1mL graduations molded into conical bottom allowing for small volume quantification



SURE CAP CENTRIFUGE TUBES - POLYPROPYLENE

S, R/D F, NP, A (Tube Only), PP

Part No.	Product Description	Pack Description	Qty/ Case	Max Force (RCF) g
229401	15mL Centrifuge Tube, Sure Cap	25/Re-sealable Bag	500	12000
229402	50mL Centrifuge Tube, Sure Cap	25/Re-sealable Bag	300	16000

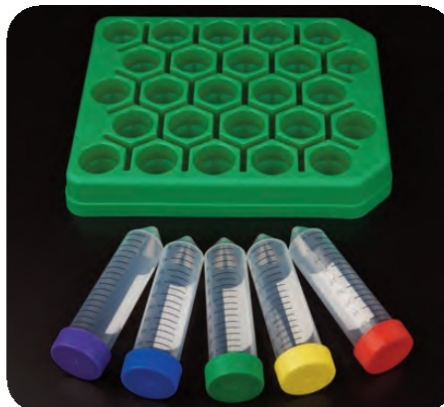
SURE CAP CENTRIFUGE TUBES - POLYSTYRENE

S, R/D F, NP, PS

229491	15mL Centrifuge Tube, Sure Cap	25/Re-sealable Bag	500	3000
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NEW Colored Cap Centrifuge Tubes



Assorted color cases (PN 230411A & 230421A) include a free reusable plastic rack (PN 229419 & 229429)

- Easily color code samples for quick identification, customization and to increase productivity
- Tubes available packed with a single color per case or assorted
- Assorted colored cap tube cases contain 4 bags of each individual color (red, yellow, green, blue, purple)
- Graduations are printed in bold easy-to-read black ink and are accurate to $\pm 2\%$
- Large white marking area provides excellent contrast for identification
- Bulk packed sterile in zip-closure bags

COLORED CAP CENTRIFUGE TUBES

S, R/D F, NP, USP, A, PP

Part No.	Product Description	Cap Color	Pack Description	Qty/Case	Max Force (RCF) g
230411A	15mL Centrifuge Tube	Assorted	25/Re-sealable Bag	500	12000
229411	15mL Centrifuge Tube	Green	25/Re-sealable Bag	500	12000
230411B	15mL Centrifuge Tube	Blue	25/Re-sealable Bag	500	12000
230411P	15mL Centrifuge Tube	Purple	25/Re-sealable Bag	500	12000
230411R	15mL Centrifuge Tube	Red	25/Re-sealable Bag	500	12000
230411Y	15mL Centrifuge Tube	Yellow	25/Re-sealable Bag	500	12000
230421A	50mL Centrifuge Tube	Assorted	25/Re-sealable Bag	500	16000
229421	50mL Centrifuge Tube	Green	25/Re-sealable Bag	500	16000
230421B	50mL Centrifuge Tube	Blue	25/Re-sealable Bag	500	16000
230421P	50mL Centrifuge Tube	Purple	25/Re-sealable Bag	500	16000
230421R	50mL Centrifuge Tube	Red	25/Re-sealable Bag	500	16000
230421Y	50mL Centrifuge Tube	Yellow	25/Re-sealable Bag	500	16000

Markers



- Fast drying, smudge resistant, fine point marker
- Ideal for permanently marking all plastic labware, especially centrifuge tubes

MARKERS

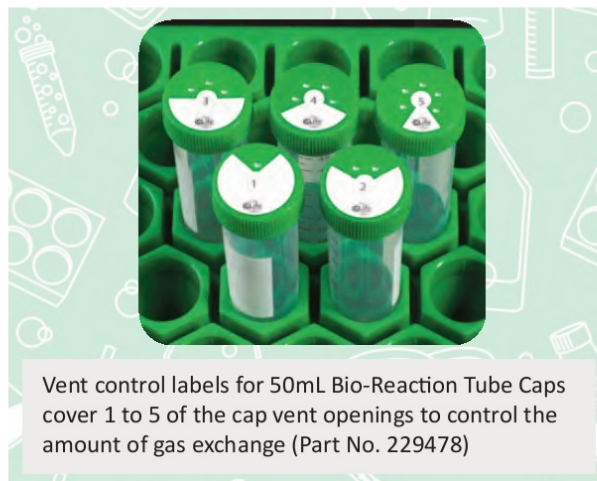
Part No.	Product Description	Qty/Case
229405	Green Tube Marker, Fast Drying Ink	5
229406	Blue Tube Marker, Fast Drying Ink	5
229407	Black Tube Marker, Fast Drying Ink	5
229408	Red Tube Marker, Fast Drying Ink	5

Bio-Reaction Tubes



- Bio-reaction tubes offer a convenient and economical option for small scale, high density suspension cell culture
- Ideal for biological reaction applications that require sterile conditions and free gas exchange
- Aseptic conditions are maintained through 0.22µm hydrophobic vented membrane
- Useful in the screening and optimization processes of suspension cells
- The reaction parameters can be optimized using small amounts of materials, maximizing the number of parallel experiments that can be performed simultaneously
- Ideal for suspension cell culture, bacterial growth, seeding larger bioreactors and supporting start-up testing procedures for larger bioreactors

- 1 Feature a 0.22µm hydrophobic membrane in the vent cap
- 2 Easy-to-read black graduations
- 3 Large white marking area



Vent control labels for 50mL Bio-Reaction Tube Caps cover 1 to 5 of the cap vent openings to control the amount of gas exchange (Part No. 229478)

BIO-REACTION TUBES

S, R/D F, NP, USP, A, PP

Part No.	Product Description	Pack Description	Qty/Case	Max Force (RCF) g
229471	15mL Bio-Reaction Tube	10/Re-sealable Bag	100	12000
229472	15mL Bio-Reaction Tube	50/Foam Rack	300	12000
229475	50mL Bio-Reaction Tube	10/Re-sealable Bag	100	16000
229476	50mL Bio-Reaction Tube	25/Foam Rack	300	16000
229479	50mL Self-Standing Bio-Reaction Tube	10/Re-sealable Bag	100	6000

BIO-REACTION TUBE CAPS

S, R/D F, NP, USP, HDPE

229473	CAP ONLY, Vented, Fits 15mL Bio-Reaction Tube	25/Re-sealable Bag	100	NA
229477	CAP ONLY, Vented, Fits 50mL Bio-Reaction Tube	25/Re-sealable Bag	100	NA

BIO-REACTION TUBE VENT CONTROL LABELS

229478	Vent Control Label, 50mL Bio-Reaction Tube, Sheet	10 Sets/Page	500	NA
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5mL Macro Centrifuge Tubes

- Offers the convenience of a micro centrifuge tube with the ability to process sample volumes up to 5mL
- Tube diameter and shape is the same as a standard 15mL conical bottom centrifuge tube enabling use with existing equipment
- All tubes have frosted marking spot and engraved graduations
- Attached flat top cap is easy to open and close with one hand
- Center of the cap includes a thin “membrane” area designed for easy puncture and access by a syringe/needle
- Opaque black tube protects light sensitive compounds



5ML MACRO CENTRIFUGE TUBES

R/D F, USP, A, PP

Part No.	Product Description	Pack Description	Qty/Case	Sterile (Y/N)	Max Force (RCF) g
229439	5mL Macro Centrifuge Tube, Black	50/Re-sealable Bag	100	N	25000
229449	5mL Macro Centrifuge Tube	20/Re-sealable Bag	100	Y	25000

Micro Centrifuge Tubes



- All tubes have a frosted marking spot and engraved graduations
- Attached flat top cap is easy to open and close with one hand
- 1.5mL opaque black tube protects light sensitive compounds

MICRO CENTRIFUGE TUBES

R/D F, NP, USP, A, PP

Part No.	Product Description	Pack Description	Qty/Case	Sterile (Y/N)	Max Force (RCF) g
229440	0.5mL Micro Centrifuge Tube	1000/Re-sealable Bag	5000	Y	25000
229441	1.5mL Micro Centrifuge Tube	500/Re-sealable Bag	1000	N	25000
229442	1.5mL Micro Centrifuge Tube	500/Re-sealable Bag	1000	Y	25000
229443	1.5mL Micro Centrifuge Tube	1000/Re-sealable Bag	5000	Y	25000
229437	1.5mL Micro Centrifuge Tube, Black	500/Re-sealable Bag	1000	Y	25000
229446	2.0mL Micro Centrifuge Tube	1000/Re-sealable Bag	5000	Y	25000
229448	2.0mL Micro Centrifuge Tube, Self-Standing	500/Re-sealable Bag	5000	N	15000

Oak Ridge Style Centrifuge Tubes



- High speed tubes feature a round bottom and uniform wall thickness
- Tubes are economical and leak-proof for refrigerated or standard centrifugation
- For proper performance, 80% of total capacity must be filled

OAK RIDGE STYLE CENTRIFUGE TUBES

N, USP, A, PP

Part No.	Product Description	Qty/Case	Max Force (RCF) g
229460	10mL Oak Ridge Style Centrifuge Tube, Round Bottom	12	50000
229461	30mL Oak Ridge Style Centrifuge Tube, Round Bottom	12	50000
229462	50mL Oak Ridge Style Centrifuge Tube, Round Bottom	12	50000

Centrifuge Bottles

- Centrifuge Bottles have a rigid body for low to moderate speed centrifugation of biological and chemical samples
- High quality polycarbonate and polypropylene have excellent chemical resistance
- Reusable and autoclavable
- Use of a rotor cushion is required to support bottles during centrifugation
- Packaged non-sterile in re-sealable bags



POLYCARBONATE

- Seal cap has extended lip to facilitate removal from rotor, and gripping ridges for easy opening and sealing
- Bottles include molded graduation lines
- Bottle must be filled 80% of total capacity to obtain maximum results

POLYPROPYLENE

- Translucent walls provide visibility of contents
- Bottle must be filled 75% of total capacity to obtain maximum results

CENTRIFUGE BOTTLES - POLYCARBONATE

N, USP, A, PC

	Part No.	Product Description	Qty/ Case	Max Force (RCF) g
NEW	229464	250mL Centrifuge Bottle - Polycarbonate	4	13,700
NEW	229469	500mL Centrifuge Bottle - Polycarbonate	4	13,850

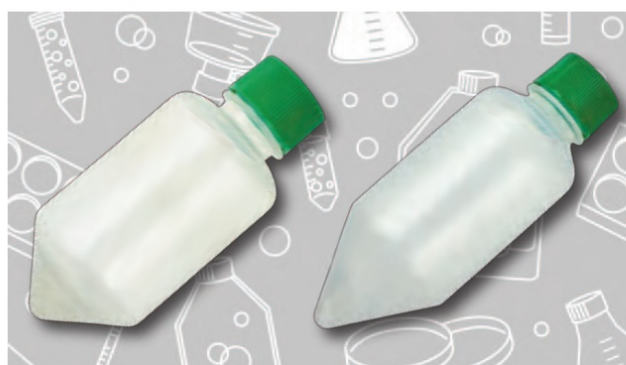
CENTRIFUGE BOTTLES - POLYPROPYLENE

N, USP, A, PP

	229467	250mL Centrifuge Bottle - Polypropylene	2	27,500
	229468	500mL Centrifuge Bottle - Polypropylene	2	13,500

Large Volume Centrifuge Tubes

- For applications requiring large volume centrifugation
- Tubes include molded graduation lines
- Polyethylene (HDPE) cap with integral plug seal provides a secure closure
- Temperature range of -80°C to 120°C
- Use of a rotor cushion is required to support tubes during centrifugation



LARGE VOLUME CENTRIFUGE TUBES

S, R/D F, NP, USP, A, PP

Part No.	Product Description	Pack Description	Qty/ Case	Max Force (RCF) g
229465	225mL Conical Bottom Centrifuge Tube	6/Re-sealable Bag	48	7500
229466	250mL Conical Bottom Centrifuge Tube	6/Re-sealable Bag	48	7500

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