



Stack the odds in your favor.
Right from the start.

Centrifugation Solutions for Life Science Applications

Corning Life Sciences brings together the brands you trust, including Corning®, Axygen®, and Falcon® to create the industry's most reliable beginning-to-end solutions.

Centrifugation is a method of separating particles commonly used in laboratories. This guide will help you choose the best Corning centrifuge and related products for your research, and increase your chances for success right from the start.



CORNING

Overview



Test the sample, not the tube

Your life science research demands the most stable and controlled environment possible for the analysis of biological and chemical samples. At Corning Life Sciences, we manufacture our centrifuge and microcentrifuge tubes from advanced, virgin resins. Corning's portfolio of tubes provides unsurpassed convenience and consistency.

The foundation for consistent research results

- ▶ Provide reliable containment of laboratory fluid samples
- ▶ Widely referenced in published procedures and protocols
- ▶ Polypropylene tubes are best suited for applications requiring greater thermal and chemical stability
- ▶ Polystyrene tubes are best suited for procedures requiring high optical clarity
- ▶ Construction that provides a secure, positive seal

Provides unsurpassed performance in critical research applications

- ▶ Exceptionally strong—Industry-leading centrifugation ratings
- ▶ Unique cap designs to meet every application and prevent leakage on the most critical applications
- ▶ Easy-to-read graduations
- ▶ Consistent biological and physical properties
- ▶ Ideal for long-term cryogenic storage of specimens at -80°C (15 to 50 mL polypropylene tubes)

Our conical tubes are easy-to-use, high quality tools to protect your precious samples. With state-of-the-art design and manufacturing, the tubes are engineered to provide high strength and wide temperature stability to perform in your critical applications. They will protect your valuable samples during centrifugation, vortexing, and long-term storage in the freezer. To meet this intense challenge, our tubes are designed for:

- ▶ High strength: State-of-the-art mold design, coupled with advanced resin selection, creates tube walls that are engineered to perform under high-stress situations
- ▶ Nonpyrogenicity
- ▶ Nontoxicity: Resins are selected via an intense array of U.S. Pharmacopoeia (USP) toxicity tests
- ▶ Low protein binding: Corning engineers and scientists are continually searching for materials and processes that minimize labware-induced interference, such as protein binding



Equipment

Benchtop Centrifuges

Corning Life Science offers a full range of laboratory centrifuges from compact mini microcentrifuges to high speed benchtop centrifuges with speeds of up to 13,500 rpm. Designed for maximum application flexibility and quality separations, they offer reliable operation for many laboratory protocols.



Benchtop Centrifuges

Corning® LSE™ Mini
Microcentrifuge



Corning LSE High Speed
Microcentrifuge



Corning LSE Compact
Centrifuge



Axygen® Axyspin Refrigerated
Microcentrifuge



Cat. No.	▶ 6770 100-240V; US, EU, UK, and AU plugs included ▶ 6765-HS 120V US plug ▶ 6766-HS 230V EU plug ▶ 6767-HS 230V UK plug ▶ 6768-HS 100V US plug	▶ 6755 120V US plug ▶ 6759 230V EU plug ▶ 6758 230V UK plug ▶ 6756 100V US plug	▶ 601-05-031 120V US plug ▶ 601-05-021 230V EU and UK plug ▶ 601-05-011 100V US plug	
Speed Range	6,000 rpm	500 to 13,300 rpm	200 to 6,000 rpm	500 to 13,500 rpm
Max RCF	2,000 x g	16,300 x g	4,185 x g	17,135 x g
Timer	-	1 to 30 min. or continuous	10 seconds to 99 hr. 59 min. or continuous	0.5 to 99 min. or continuous
Max Capacity	8 microcentrifuge tubes or 4 PCR strip tubes	24 x 1.5 or 2.0 mL microcentrifuge tubes	6 x 50 mL centrifuge tubes	24 x 1.5 or 2.0 mL microcentrifuge tubes
Rotor Cat. No.	Two rotors included	Rotor included	480136	Rotor included
	-	-	480137	-
	-	-	480138	-
	-	-	480139	-
	-	-	480143	-
Adapter Cat. No.	6770-RTA.20	480134	480140	-
	6770-RTA.25	480135	480141	-
	6770-RTA.5	-	480142	-
See page	6	7	8	9

Centrifuging Safely – Suggestions for Safe Use



Always secure the centrifugation lid for your safety, and make sure the caps are tightly sealed to avoid a mess or biological spill.

Avoid mixing your centrifuge tube samples by inversion for cell culture/sterility purposes, as a liquid bridge to exterior when opening can introduce contamination.

Pipet trituration is recommended for resuspension of a sample compared to physical inversion of the centrifuge tube.

When marking tubes, black ink Sharpie® pens are the most resistant to alcohol. Other colors tend to smudge.

When working in the biosafety cabinet, or simply on the benchtop, “pre-loosening” the caps can save time and frustration. With proper technique, it allows the user to handle tubes with one hand while the other hand may be used to hold the pipet/pipet controller.

Corning® Centrifuge tubes are tested for leakage. They should not break or leak if used in a properly balanced rotor with suitable carriers, holders, and adapters that fully support the tubes when run in accordance with the guidelines in this section. These tubes are intended for one-time use only; reuse is not recommended as breakage or leakage may occur.

CAUTION: The following information is provided to serve as a general guideline for determining suitability of Corning centrifuge tubes for your applications. In addition, Corning recommends following the procedures outlined by the centrifuge user guide, as well as conducting a trial run to determine proper conditions before beginning any critical applications.

Temperature Stability

The recommended working temperature range for Corning centrifuge tubes is 0°C to 40°C. The suitability of these tubes for storage below 0°C depends on both the solution and the storage conditions. In general, the polypropylene (PP) and polyethylene terephthalate (PET) tubes are more resistant to stress at low temperatures than polystyrene (PS). It is strongly recommended that a trial run be performed under actual conditions to test the suitability of the tubes for frozen storage. Do not freeze tubes using Corning foam racks.

Chemical Compatibility

The mechanical strength, flexibility, color, weight, and dimensional stability of all plastic centrifuge tubes are affected to varying degrees by the chemicals with which they come in contact. Specific operating conditions, especially temperature, relative centrifugal force (RCF), rotor type, carrier design, and run length will also affect tube performance. Always conduct a trial run to determine proper conditions before use.

CAUTION: Approved safety containment systems should be used when centrifuging pathogenic organisms, specimens known or suspected of being infectious, or any other potentially infectious or hazardous materials.

Proper balancing and distribution of the load

Proper balancing and distribution of the load in a centrifuge is critical for optimum performance and to prevent damage to the tubes or centrifuge. Opposing buckets or loads should always be balanced within the range specified by the manufacturer. Tubes should always be distributed in the buckets with respect to the center of rotation, as well as the pivotal axis of the bucket. Failure to do this may prevent the bucket from achieving a horizontal position during the centrifugation run. Uneven separations or tube failure may result.

These centrifuge tubes are intended for use by persons knowledgeable in safe laboratory practices. Failure can result from surface damage, exceeding the specified RCF values, using unsuitable support systems, improper temperatures, or incompatible chemicals. Read protocols and instruction manuals carefully. Do not confuse speed or revolutions per minute (RPM) with relative centrifugal force (RCF). Instructions for centrifuging a sample at a given RPM and time are incomplete unless the rotor or radius is specified. Protocols should always state the time and RCF value for centrifuging a sample.

Corning® LSE™ Mini Microcentrifuge



The Corning LSE Mini microcentrifuge is a personal bench top instrument that operates at a fixed speed of 6,000 rpm (2,000 x g) and was designed for quick spin downs of micro-samples. Operation is made simpler and more convenient with the design of a quick-release rotor system and electronic brake. Once samples are loaded and the lid is closed, the rotor rapidly accelerates to 6,000 rpm.

This speed range is ideal for bringing small droplets to the bottom of the tubes for micro-filtrations or as basic separations. Pressing the lid release button will activate the electronic brake, which brings the rotor to a fast stop. The mini microcentrifuge can accommodate up to 8 microcentrifuge tubes or 4 PCR strip tubes. Smaller samples such as 0.2, 0.25, and 0.5 mL can also be processed by using the included tube adapters.

- ▶ Quick-release rotor system eliminates the need for tools to exchange rotors
- ▶ Electronic braking provides rapid deceleration for more efficient sample prep
- ▶ Compact, rugged design withstands heavy use in a crowded lab environment
- ▶ Dual lid switch provides safe operation
- ▶ Ergonomic design allows for comfortable handling

Ordering Information

Cat. No.	Description
6770	Corning LSE Mini microcentrifuge, 100-240V; US, EU, UK, and AU plugs included
6770-RT	Rotor, holds 8 x 1.5 or 2.0 mL tubes
6770-RTS	Rotor, holds 4 x 8-strip tubes
6770-RTA.20	Adapter, 0.20 for rotor (Cat. No. 6770-RT)
6770-RTA.25	Adapter, 0.25 for rotor (Cat. No. 6770-RT)
6770-RTA.5	Adapter, 0.5 for rotor (Cat. No. 6770-RT)

Compatible tubes on pages 12 through 15.

Corning® LSE™ High Speed Microcentrifuge



The Corning LSE High speed microcentrifuge features an easy-to-use, digital control interface and high-speed performance for quick nucleic acid and protein separations. Two control knobs are used to precisely set rotor speed and run time, and parameters are shown on the easy-to-read LED displays. Press the “Speed/G-Force” knob to toggle the display between rpm and calculated g-force. The LSE high speed microcentrifuge incorporates a brushless drive and unique air cooling system to both reduce noise and minimize sample heating even during prolonged runs at maximum speed. Rotor included.

- ▶ Fast acceleration to a maximum speed 13,300 rpm/16,300 x g
- ▶ Complete with easy access, 24 x 1.5 or 2.0 mL rotor
- ▶ Precise, digital control system
- ▶ Set and view rotor speed in rpm or g-force
- ▶ Quiet and cool running, even at maximum speed

Ordering Information

Corning LSE High Speed Microcentrifuge

Cat. No.	Voltage	Plug Type
6765-HS	120V	US
6766-HS	230V	EU
6767-HS	230V	UK
6768-HS	100V	US

Accessories

Cat. No.	Description	Qty/Pk
480134	Individual adaptors for 0.5 or 0.4 mL tubes	6
480135	Individual adaptors for 0.2 mL tubes	6

Compatible tubes on pages 14 and 16.

Corning® LSE™ Compact Centrifuge



The Corning LSE Compact centrifuge is a space saving centrifuge ideal for use in life science and industrial research labs. Three angle rotors are available for use with the Corning LSE compact centrifuge, which can accommodate tube sizes of 15 and 50 mL microcentrifuge tubes. In addition, the LSE compact centrifuge will accommodate a swing-out rotor for 6 x 5 mL tubes. Optional adapters accommodate other various tube sizes including standard conical tubes and round bottom tubes. The LSE compact centrifuge has a maximum g-force of 4,185 x g. Other features include an electronic lid lock system, over speed protection, and an automatic shut off imbalance detection system. The Corning LSE compact centrifuge is cold room compatible. Rotors are sold separately.

- ▶ Capacity of 6 x 50 mL or 12 x 15 mL rotor
- ▶ Maximum speed 6,000 rpm/4,185 x g
- ▶ Accepts both conical and round bottom tubes
- ▶ Space saving footprint

Ordering Information

Corning LSE Compact Centrifuge

Cat. No.	Voltage	Plug Type
6755	120V	US
6759	230V	EU
6758	230V	UK
6756	100V	US

Accessories

Cat. No.	Description	Qty/Pk
480136	LSE 6 x 50 mL fixed angle rotor	1
480137	LSE 12 x 15 mL fixed angle rotor	1
480138	LSE 6 x 5 mL swing-out rotor	1
480139	LSE 18 x 1.5 mL fixed angle rotor	1
480143	LSE combination rotor for 5, 15, and 50 mL tubes	1
480140	LSE adapters for 10 and 15 mL tubes in 50 mL rotor	6
480141	LSE adapters for 5 and 7 mL tubes in 50 mL rotor	6
480142	LSE adapters for 5, 7, and 10 mL tubes in 15 mL rotor	6

Compatible tubes on pages 12, 17, and 19.

Axygen® Axyspin Refrigerated Microcentrifuge



The Axyspin refrigerated microcentrifuge is a high performance refrigerated microcentrifuge designed to quickly process samples for applications such as nucleic acid and protein preparation, purifications, extractions, and pelleting.

- ▶ Powerful refrigeration system cools to 4°C in 8 minutes
- ▶ 24 x 1.5 or 2.0 mL aluminum rotor included
- ▶ Exceptionally quiet and compact

The Axyspin refrigerated microcentrifuge combines a powerful yet silent, brushless drive with an efficient cooling system, all in a compact footprint. Brushless drive technology has been fine-tuned in the Axyspin refrigerated microcentrifuge to deliver fast acceleration and deceleration of the solid aluminum rotor. The uniquely designed 24-place rotor allows easy access to the tops of sample tubes. Starting from room temperature, the chamber of the Axyspin refrigerated microcentrifuge cools to 4°C in just 8 minutes. The control panel features a backlit LCD display, which allows users to easily view running parameters while the large control knob facilitates digital setting of rotor speed, run time, and temperature. These high-performance features allow for faster sample processing and less down time.

The rotor of the Axyspin refrigerated microcentrifuge can accommodate 1.5 or 2.0 mL Axyspin microcentrifuge tubes, including the most popular catalog numbers (MCT-150-C and MCT-200-C).

Ordering Information

Axygen Axyspin Refrigerated Microcentrifuge

Cat. No.	Voltage	Plug Type
601-05-031	120V	US
601-05-021	230V	EU/UK
601-05-011	100V	US

Compatible tubes on pages 12 through 15.



Commitment to Quality

Centrifuge Tubes

Corning Life Sciences offers an extensive selection of laboratory products ranging from equipment to consumables. Pair our centrifuge with the corresponding tubes for a perfect match to ensure consistency each and every time.

Corning® Centrifuge Tubes



Corning screw cap polypropylene microcentrifuge tubes feature screw caps that provide a tight secure seal.

- ▶ Choice of attached cap with silicone O-ring or unattached rim seal cap
- ▶ Maximum RCF is 20,000 x g
- ▶ Sterile
- ▶ Nonpyrogenic
- ▶ RNase-/DNase-free



Corning 15 mL and 50 mL clear polyethylene terephthalate (PET) centrifuge tubes have traditional polyethylene plug seal caps and are bulk packed or in rack format. Foam racks can be purchased separately. Please check our Technical Resources for information on the physical and chemical properties of Corning plastic centrifuge tubes, as well as important suggestions for safe use.

- ▶ Black printed graduations and a large white marking spot
- ▶ Maximum RCF is 3,600 x g
- ▶ Sterile
- ▶ Nonpyrogenic
- ▶ RNase-/DNase-free



Corning 15 mL clear polypropylene (PP) centrifuge tubes come with either a plug seal cap or the advanced polyethylene Corning CentriStar™ caps, and are packed 50 per rack. The CentriStar cap has an easy-on/easy-off flat top and offers advanced ergonomics with its wider knurls and roll-over edge design for easier gripping. This leak-proof design comes with a plug feature that virtually eliminates all seepage when used under recommended conditions.

- ▶ Maximum RCF up to 12,500 x g (tubes with CentriStar caps)
- ▶ Maximum RCF up to 12,000 x g (tubes with plug seal caps).
- ▶ Tubes with plug seal caps are 95 kPa (14 psi) pressure tested
- ▶ Temperature range from -80°C to 120°C

NOTE: Do not freeze the tubes in the foam racks.

- ▶ 5-year shelf life
- ▶ Ease-of-use
- ▶ Clear accurate graduations and a large white marking spot
- ▶ Heavy-metal-free color concentrate
- ▶ Medical grade polypropylene
- ▶ Sterile
- ▶ Nonpyrogenic
- ▶ RNase-/DNase-free

Racks for 15 and 50 mL Corning conical tubes are ideal for upright storage.



Corning 50 mL clear polypropylene (PP) conical bottom centrifuge tubes come with either a plug seal cap or the advanced polyethylene Corning CentriStar caps. They are bulk packed or in rack format. Please check our Technical Resources for information on the physical and chemical properties of Corning plastic centrifuge tubes, as well as important suggestions for safe use.

- ▶ Black printed graduations and a large white marking spot
- ▶ Maximum RCF is 17,000 x g (tubes with CentriStar caps)
- ▶ Maximum RCF is 15,500 x g (tubes with plug seal caps)
- ▶ Tubes with plug seal caps are 95 kPa (14 psi) pressure tested
- ▶ Sterile
- ▶ Nonpyrogenic
- ▶ RNase-/DNase-free



Corning® 250 mL and 500 mL polypropylene (PP) centrifuge tubes have traditional polyethylene plug seal caps and are ideal for applications requiring large volume centrifugation. Please check our Technical Resources for information on the physical and chemical properties of Corning plastic centrifuge tubes, as well as important suggestions for safe use. **NOTE:** Support cushions must be used with this product unless the centrifuge rotor has appropriate V-bottom cushions.

- ▶ Maximum RCF of 6,000 x g
- ▶ Tubes are sterile and nonpyrogenic

Ordering Information

Corning Screw Cap Polypropylene Microcentrifuge Tubes

Compatible with Corning LSE™ Mini Microcentrifuge (Cat. No. 6770) and Axygen® Axyspin Refrigerated Microcentrifuge (Cat. Nos. 601-05-031, 601-05-021, 601-05-011)

Cat. No.	Volume (mL)	Screw Cap	Color	RCF Rating (x g)	Quantity
430909	1.5	Attached	Clear	20,000	50/pk, 500/cs
430915	2	Attached	Clear	20,000	50/pk, 500/cs
430917	2	Unattached	Clear	20,000	50/pk, 500/cs



Corning Centrifuge Tubes

Compatible with Corning LSE Compact Centrifuge (Cat. Nos. 6755, 6758, 6759, 6756)

Cat. No.	Volume (mL)	Style	Cap	RCF Rating (x g)	Quantity
430053	15	Conical, PET, bulk	Plug seal	3,600	50/sleeve, 500/cs
430055	15	Conical, PET, rack	Plug seal	3,600	50/rack, 500/cs
430052	15	Conical, PP, rack	Plug seal	12,000	50/rack, 500/cs
430766	15	Conical, PP, bulk	Plug seal	12,000	50/sleeve, 500/cs
430790	15	Conical, PP, rack	Corning CentriStar™	12,500	50/rack, 500/cs
430791	15	Conical, PP, bulk	Corning CentriStar	12,500	50/sleeve, 500/cs
430290	50	Conical, PP, rack	Plug seal	15,500	25/rack, 500/cs
430291	50	Conical, PP, bulk	Plug seal	15,500	25/sleeve, 500/cs
430304	50	Conical, PET, rack	Plug seal	3,600	25/rack, 500/cs
430828	50	Conical, PP, rack	Corning CentriStar	17,000	25/rack, 500/cs
430829	50	Conical, PP, bulk	Corning CentriStar	17,000	25/sleeve, 500/cs



Please check our [Resource Library](#) for information on the physical and chemical properties of Corning plastic centrifuge tubes as well as important suggestions for safe use.

250 mL and 500 mL Premium Quality Centrifuge Tubes and Support Cushions

Cat. No.	Description	Material	Cap	RCF Rating (x g)	Quantity
430776	250 mL centrifuge tube	PP	Plug seal	6,000	6/pk, 102/cs
430236	250 mL support cushion*	PEI	N/A	N/A	6/cs
431123	500 mL centrifuge tube	PP	Plug seal	6,000	6/pk, 36/cs
431124	500 mL support cushion*	PEI	N/A	N/A	6/cs

PEI = Polyetherimide

*Support cushions must be used with the 250 mL and 500 mL centrifuge tubes unless the rotor has appropriately shaped V-bottom holders.

Axygen® MaxyClear SnapLock Microcentrifuge Tubes



Axygen MaxyClear SnapLock microcentrifuge tubes are available in a variety of colors, sterile, and Axxygen Maximum Recovery® surface. All Axxygen SnapLock microcentrifuge tubes have frosted cap surfaces for labeling, frosted panels on the side for writing, and a piercing port in the center of the cap.

- ▶ Maximum RCF is 14,000 x g
- ▶ SnapLock cap assures efficient seal
- ▶ Thin membrane in cap center allows easy access to sample by using a syringe needle
- ▶ Co-polymer and homopolymer tubes offer exceptional strength and chemical resistance
- ▶ Sterility Assurance Level (SAL) of 10^{-6}
- ▶ Nonpyrogenic
- ▶ RNase-/DNase-free and human gDNA-free



Ordering Information

Axygen MaxyClear SnapLock Microcentrifuge Tubes

Compatible with Corning® LSE™ Mini Microcentrifuge (Cat. No. 6770) and Axxygen Axyspin Refrigerated Microcentrifuge (Cat. Nos. 601-05-031, 601-05-021, 601-05-011)

Cat. No.	Volume/Material	Surface	Color	RCF Rating (x g)	Quantity
MCT-150-C	1.5 mL Homopolymer	Standard	Clear	14,000	500/pk, 10 pks/cs
MCT-150-B	1.5 mL Homopolymer	Standard	Blue	14,000	500/pk, 10 pks/cs
MCT-150-R	1.5 mL Homopolymer	Standard	Red	14,000	500/pk, 10 pks/cs
MCT-150-Y	1.5 mL Homopolymer	Standard	Yellow	14,000	500/pk, 10 pks/cs
MCT-150-O	1.5 mL Homopolymer	Standard	Orange	14,000	500/pk, 10 pks/cs
MCT-150-A	1.5 mL Homopolymer	Standard	Amber	14,000	500/pk, 10 pks/cs
MCT-150-G	1.5 mL Homopolymer	Standard	Green	14,000	500/pk, 10 pks/cs
MCT-150-L-C	1.5 mL Homopolymer	Maximum Recovery	Clear	14,000	250/pk, 10 pks/cs
MCT-150-C-S	1.5 mL Homopolymer	Standard	Clear	14,000	250/pk, 10 pks/cs
MCT-150-NC	1.5 mL Homopolymer	Standard	Clear	14,000	500/pk, 10 pks/cs
MCT-175-C	1.7 mL Copolymer	Standard	Clear	14,000	500/pk, 10 pks/cs
MCT-175-B	1.7 mL Copolymer	Standard	Blue	14,000	500/pk, 10 pks/cs
MCT-175-R	1.7 mL Copolymer	Standard	Red	14,000	500/pk, 10 pks/cs
MCT-175-Y	1.7 mL Copolymer	Standard	Yellow	14,000	500/pk, 10 pks/cs
MCT-175-O	1.7 mL Copolymer	Standard	Orange	14,000	500/pk, 10 pks/cs
MCT-175-A	1.7 mL Copolymer	Standard	Amber	14,000	500/pk, 10 pks/cs
MCT-175-G	1.7 mL Copolymer	Standard	Green	14,000	500/pk, 10 pks/cs
MCT-175-L-C	1.7 mL Copolymer	Maximum Recovery	Clear	14,000	250/pk, 10 pks/cs
MCT-175-C-S	1.7 mL Copolymer	Standard	Clear	14,000	250/ pk, 10 pks/ cs



When dealing with precious/viscous samples (such as DNA/protein storage), Axxygen Maximum Recovery surface (low binding) products are recommended for minimal sample and volume loss.

Axygen® MaxyClear SnapLock Microcentrifuge Tubes (continued)

Compatible with Corning® LSE™ Mini Microcentrifuge (Cat. No. 6770) and Axxygen Axyspin Refrigerated Microcentrifuge (Cat. Nos. 601-05-031, 601-05-021, 601-05-011)

Cat. No.	Volume/Material	Surface	Color	RCF Rating (x g)	Quantity
MCT-200-C	2.0 mL Homopolymer	Standard	Clear	14,000	500/pk, 10 pks/cs
MCT-200-B	2.0 mL Homopolymer	Standard	Blue	14,000	500/pk, 10 pks/cs
MCT-200-R	2.0 mL Homopolymer	Standard	Red	14,000	500/pk, 10 pks/cs
MCT-200-Y	2.0 mL Homopolymer	Standard	Yellow	14,000	500/pk, 10 pks/cs
MCT-200-O	2.0 mL Homopolymer	Standard	Orange	14,000	500/pk, 10 pks/cs
MCT-200-A	2.0 mL Homopolymer	Standard	Amber	14,000	500/pk, 10 pks/cs
MCT-200-G	2.0 mL Homopolymer	Standard	Green	14,000	500/pk, 10 pks/cs
MCT-200-C-L-S	2.0 mL Homopolymer	Maxymum Recovery	Clear	14,000	250/pk, 10 pks/cs
MCT-200-C-S	2.0 mL Homopolymer	Standard	Clear	14,000	50/bag, 5 bags/pk, 10 pks/cs
MCT-200-NC	2.0 mL Homopolymer	Standard	Clear	14,000	500/pk, 10 pks/cs

**Compatible with Corning LSE High Speed Microcentrifuge (Cat. Nos. 6765-HS, 6766-HS, 6767-HS, 6768-HS)**

Cat. No.	Volume/Material	Surface	Color	RCF Rating (x g)	Quantity
MCT-060-C	0.6 mL Homopolymer	Standard	Clear	14,000	1000/pk, 10 pks/cs
MCT-060-B	0.6 mL Homopolymer	Standard	Blue	14,000	1000/pk, 10 pks/cs
MCT-060-R	0.6 mL Homopolymer	Standard	Red	14,000	1000/pk, 10 pks/cs
MCT-060-Y	0.6 mL Homopolymer	Standard	Yellow	14,000	1000/pk, 10 pks/cs
MCT-060-O	0.6 mL Homopolymer	Standard	Orange	14,000	1000/pk, 10 pks/cs
MCT-060-A	0.6 mL Homopolymer	Standard	Amber	14,000	1000/pk, 10 pks/cs
MCT-060-G	0.6 mL Homopolymer	Standard	Green	14,000	1000/pk, 10 pks/cs
MCT-060-L-C	0.6 mL Homopolymer	Maxymum Recovery	Clear	14,000	500/pk, 10 pks/cs
MCT-060-C-S	0.6 mL Homopolymer	Standard	Clear	14,000	100/bag, 5 bags/pk, 10 pks/cs

Co-polymer tubes are not certified to be autoclavable or boil-proof.

Clear homopolymer microcentrifuge tubes are boil-proof. Colored tubes are not boil-proof

Axygen® MaxyClear Screw Cap Microcentrifuge Tubes



Axygen MaxyClear Screw cap microcentrifuge tubes serve a broad range of laboratory needs including collection, processing, centrifugation, long-term storage and packaging/shipping of restriction enzymes, and other reagents. Color-coded caps provide a syringe port which is easily pierced for radioisotope labeling and fraction collecting.

The closure on Axxygen screw caps feature an O-ring that is formulated and manufactured from a specially selected material that is resistant to many commonly used laboratory chemicals. The Alignment Orientation Tab allows the microcentrifuge tube to be aligned with the centrifuge rotor for multiple applications, including desalting. This ensures that the microcentrifuge tube can be re-spun without disturbing the partially pelletized sediment.

- ▶ Maximum RCF is 20,000 x g
- ▶ Screw cap contains O-rings to assure efficient sealing and avoid evaporation
- ▶ Nonpyrogenic
- ▶ RNase-/DNase-free and human gDNA-free

Ordering Information

Axygen Screw Cap Tubes

Compatible with Corning® LSE™ Mini Microcentrifuge (Cat. No. 6770) and Axxygen Axyspin Refrigerated Microcentrifuge (Cat. Nos. 601-05-031, 601-05-021, 601-05-011)

Cat. No.	Volume (mL)	Style	Color	RCF Rating (x g)	Quantity
SCT-150-C-S	1.5	Conical, sterile	Clear	20,000	100/bag, 5 bag/pk, 8 pks/cs
SCT-150-SS-C-S	1.5	Self-standing, sterile	Clear	20,000	100/bag, 5 bag/pk, 8 pks/cs
SCT-200-C-S	2	Conical, sterile	Clear	20,000	100/bag, 5 bag/pk, 8 pks/cs
SCT-200-SS-C-S	2	Self-standing, sterile	Clear	20,000	100/bag, 5 bag/pk, 8 pks/cs

Colored-cap versions are also available in sterile format.

Axygen Screw Cap Tubes (tubes only)

Cat. No.	Volume (mL)	Style	Color	RCF Rating (x g)	Quantity
ST-150	1.5	Conical	Clear	20,000	500/pk, 8 pks/cs
ST-150-SS	1.5	Self-standing	Clear	20,000	500/pk, 8 pks/cs
ST-150-X	1.5	Conical	Amber	20,000	500/pk, 8 pks/cs
ST-150-SS-X	1.5	Self-standing	Amber	20,000	500/pk, 8 pks/cs
ST-200	2	Conical	Clear	20,000	500/pk, 8 pks/cs
ST-200-SS	2	Self-standing	Clear	20,000	500/pk, 8 pks/cs
ST-200-X	2	Conical	Amber	20,000	500/pk, 8 pks/cs
ST-200-SS-X	2	Self-standing	Amber	20,000	500/pk, 8 pks/cs

Axygen Microcentrifuge Screw Caps, with O-ring

Cat. No.	Material	Color	Quantity
SCO-C	PP	Clear	500/pk, 8 pks/cs
SCO-B	PP	Blue	500/pk, 8 pks/cs
SCO-BR	PP	Brown	500/pk, 8 pks/cs
SCO-R	PP	Red	500/pk, 8 pks/cs
SCO-P	PP	Pink	500/pk, 8 pks/cs
SCO-GR	PP	Grey	500/pk, 8 pks/cs
SCO-W	PP	White	500/pk, 8 pks/cs
SCO-V	PP	Violet	500/pk, 8 pks/cs
SCO-O	PP	Orange	500/pk, 8 pks/cs
SCO-G	PP	Green	500/pk, 8 pks/cs



Screw cap tubes are often used for storage of aliquoting reagents to minimize sample loss by evaporation. They serve a broad range of laboratory needs including collection, processing, centrifugation, long-term storage and packaging/shipping of restriction enzymes, and other reagents.



Costar® Snap Cap Polypropylene Microcentrifuge Tubes



Costar microcentrifuge tubes are made of natural (uncolored) or rainbow (colored) polypropylene and are RNase-/DNase-free.

- ▶ Supplied nonsterile and are autoclavable
- ▶ External graduations and frosted writing spot for easy sample identification
- ▶ Positive seal design allows for repeated opening and closing
- ▶ Flat cap surface for convenient labeling
- ▶ Withstands a maximum RCF of 17,000 x g
- ▶ Costar low binding microcentrifuge tubes feature a bonded polymer technology that reduces protein and nucleic acid binding, resulting in better sample recovery.

Ordering Information

Costar Snap Cap Polypropylene Microcentrifuge Tubes

Compatible with Corning® LSE™ High Speed Microcentrifuge (Cat. Nos. 6765-HS, 6766-HS, 6767-HS, 6768-HS)



Cat. No.	Volume (mL)	Surface	Color	RCF Rating (x g)	Quantity
3208	0.65	Standard	Clear	17,000	500/pk, 2 pk/cs
3209	0.65	Standard	Rainbow*	17,000	200/pk, 5 pk/cs
3206	0.65	Low Binding	Clear	17,000	500/pk, 1 pk/cs

*Rainbow pack includes one bag each of blue, green, yellow, red, and orange tubes.

Falcon® Conical Centrifuge Tubes



Falcon 15 mL polystyrene (PS) conical centrifuge tubes have a 1,800 RCF rating. The tubes come with polyethylene dome seal screw caps. The sterile tubes are packaged in bulk pack or rack format.

- ▶ Approximate dimensions: 17 mm O.D.; 120 mm length
- ▶ Sterilized by gamma irradiation
- ▶ Noncytotoxic
- ▶ Nonpyrogenic
- ▶ RNase-/DNase-free
- ▶ Dark blue printed graduations and white writing patch
- ▶ Polyethylene dome-seal screw cap offers positive seal over full circumference
- ▶ Rack can be separated into two sections

Corning offers closed-caps microcentrifuge tubes for ready-to-go, sterile options without the need for autoclaving.

For specific test conditions and additional guidance on high speed centrifugation see the Rotor Guide in product catalog or online at www.corning.com/lifesciences

Falcon 15 mL high-clarity polypropylene (PP) conical centrifuge tubes have a 12,000 RCF rating. The tubes come with polyethylene dome seal screw caps. The sterile tubes are packaged in bulk pack or rack format.

- ▶ Approximate dimensions: 17 mm O.D.; 120 mm length
- ▶ Sterilized by gamma irradiation
- ▶ Noncytotoxic
- ▶ Nonpyrogenic
- ▶ RNase-/DNase-free
- ▶ Dark blue printed graduations and white writing patch
- ▶ Polyethylene dome-seal screw cap offers positive seal over full circumference
- ▶ Strong, clarified polypropylene
- ▶ Chemically resistant to alcohols and mild organic solvents (not recommended for extraction procedures)
- ▶ Hydrophobic, biologically inert surface for good cell or protein recovery
- ▶ Translucent wall permits easy viewing of tube contents
- ▶ Stable from -80°C to +121°C

NOTE: Do not freeze the tubes in the foam racks.

Falcon 50 mL high-clarity polypropylene (PP) conical centrifuge tubes have a polyethylene flat-top screw cap and a 16,000 RCF rating. The sterile tubes are packaged in bulk pack or rack format.

- ▶ Approximate dimensions: 30 mm O.D.; 115 mm length
- ▶ Sterilized by gamma irradiation
- ▶ Noncytotoxic
- ▶ Nonpyrogenic
- ▶ RNase-/DNase-free
- ▶ Dark blue printed graduations and white writing patch
- ▶ Polyethylene flat-top screw cap allows one hand manipulation and provides a level writing area

Ordering Information

Falcon Conical Centrifuge Tubes

Compatible with Corning® LSE™ Compact Centrifuge (Cat. Nos. 6755, 6758, 6759, 6756)



Cat. No.	Volume (mL)	Style	Cap	RCF Rating (x g)	Quantity	Compatible Rotor Cat. No.
352095	15	Conical, PS, bulk	Dome seal	1,800	50/sleeve, 500/cs	480137
352099	15	Conical, PS, rack	Dome seal	1,800	50/rack, 500/cs	480137
352096	15	Conical, PP, bulk	Dome seal	12,000	50/sleeve, 500/cs	480137
352097	15	Conical, PP, rack	Dome seal	12,000	50/rack, 500/cs	480137
352070	50	Conical, PP, bulk	Flat top	16,000	25/sleeve, 500/cs	480136
352098	50	Conical, PP, rack	Flat top	16,000	25/rack, 500/cs	480136



Designed for high speed applications

Centrifuge Bottles

Corning centrifuge bottles are designed for large volume processing in cell harvesting, pelleting, and protein purification. Their construction and design enable researchers to decrease the number of centrifugation cycles, improve laboratory efficiency, and boost productivity.

Corning® Centrifuge Bottles



Superior Selection

- Available in 250 mL and 500 mL sizes
 - Polypropylene and polycarbonate
 - Two cap styles: standard and high performance with silicone O-ring
- NOTE:** Caps are not interchangeable among different material/size bottles.

Ease of Use

- Specially designed cap with a built-in easy grip feature
- Wide-mouth bottle design for improved liquid handling
- Clear graduations and textured marking spot
- Bottles are compatible with most centrifuges, and do not require special buckets

Reliable Quality

- Extra-thick walls for durability
- Leak-free processing at maximum rated speeds. (Fill volume should not exceed 80% of total bottle capacity. For volumes that exceed 80% of the total bottle capacity, Corning recommends using a larger vessel.)
- Polypropylene and Polycarbonate tubes are autoclavable at 121°C, 15 psi for 20 minutes
- Nonsterile

Ordering Information

Corning Centrifuge Bottles

Compatible with Corning LSE™ Compact Centrifuge (Cat. Nos. 6755, 6758, 6759, 6756)

Cat. No.	Volume (mL)	Style	Cap	RCF Rating (x g)	Quantity
431840	250	Flat, PP	Silicone O-ring	13,500	4/pk, 36/cs
431841	250	Flat, PP	Screw cap	8,250	4/pk, 36/cs
431842	250	Flat, PC	Silicone O-ring	13,500	4/pk, 36/cs
431843	250	Flat, PC	Screw cap	8,250	4/pk, 36/cs
431844	500	Flat, PP	Silicone O-ring	13,500	4/pk, 24/cs
431845	500	Flat, PP	Screw cap	8,250	4/pk, 24/cs
431846	500	Flat, PC	Silicone O-ring	13,500	4/pk, 24/cs
431847	500	Flat, PC	Screw cap	8,250	4/pk, 24/cs

Frequently Asked Questions

1. The Polypropylene conical tubes broke when frozen at -80°C degree. What could be the cause?

When tubes are frozen on a styrofoam tube rack, the hidden parts of styrofoam will freeze later due to the difference in thermal conductivity. This is a phenomenon that occurs when the liquid solidifies due to freezing from the top and the force escape area is lost. In this case, do not use styrofoam racks when freezing, as the tubes will be more likely to crack.

Expanded polystyrene (foam) racks are not recommended for storage below 0°C.

2. What is the relationship between RCF, RPM, and G?

$RCF \text{ (relative centrifugal strength)} = G \text{ (gravity)} = 0.00001118 \times r \times N^2$

r = Distance from the bottom of the tube to the center of the centrifuge (cm)

N = RPM (rounds per minute) = Rotation speed

3. Can I repeat the centrifugation?

We do not recommend the repetition of centrifugation with one tube. Centrifuge tubes can suffer damages during centrifugation such as hairline cracks, deformations, and other compromising damage even if the centrifugation was done within the acceptable conditions.

4. Can I autoclave the Polypropylene conical tubes for re-use?

We do not recommend the reuse of the products unless stated. Autoclaving will accentuate any deformation of the tubes and caps causing leakage, contamination, and failure upon further centrifugation.

5. Why can I smell an odor in some tubes? Is it toxic for cell culture?

The raw material supplier for the tube products have provided documentation that directly links the smell to an additive used in the resin to improve the clarity of the plastic. An unfortunate side effect is a low-level aldehyde odor on freshly made product.

An *in vitro* study, based on USP <87>, Biological Reactivity Test, In Vitro, was conducted on this article to determine the potential for cytotoxicity, and the test article showed no evidence of causing cell lysis or toxicity.

We have extensively tested all materials and additives used as part of our manufacturing process and found them to be in compliance with our requirements. Therefore, while this odor may be present, we can assure you that it does not affect the sterility, performance, or any of the other claims we make on behalf of the tube products.

6. Why can I see an obvious black spot on some of 15 mL and 50 mL centrifuge tubes?

As an internal control we print a black spot on the clear area of some tubes. This does not affect the form, fit, or function of the tube.

7. Are all the conical tubes and microcentrifuge tubes heavy metal-free?

These products comply in all respects with the limitations on heavy metals identified in the CONEG model legislation based raw material supplier documentation. The sum of the concentrations of mercury, lead, cadmium, and hexavalent chromium in this product does not exceed 100 parts per million per weight. In addition, none of these metals are intentionally added to this product and no significant levels of these metals are expected to be present.

Trace levels of these substances may be present as a result of the specific characteristics of the raw materials and/or the manufacturing process.

We have not specifically analyzed these products for the presence of these substances.

8. Can I autoclave Axygen® Maxymum Recovery® microcentrifuge tubes?

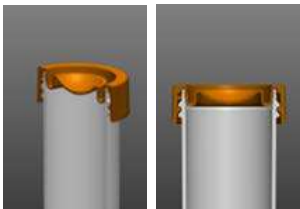
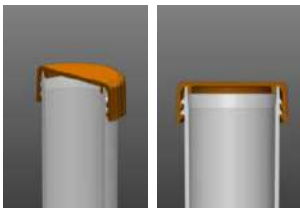
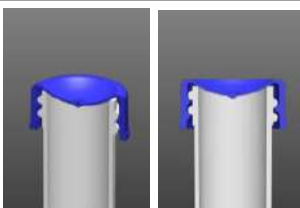
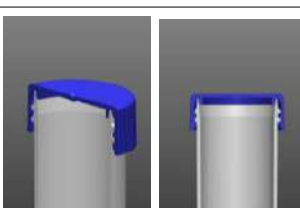
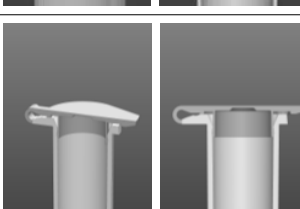
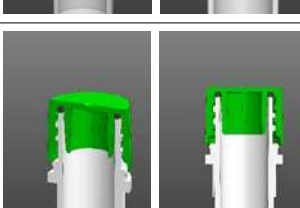
Please do not autoclave Maxymum Recovery products, or their performance would be compromised. Please use pre-sterile Maxymum Recovery products instead.

9. How do you properly close a centrifuge tube with threads?

To ensure the proper closure and seal between the centrifuge tube cap and tube, we recommend the following procedure:

1. Holding the tube body upright, place the cap on top of the tube.
 2. While maintaining gentle downward pressure on the cap, slowly turn the cap backwards (the direction for normally unscrewing the cap), and the cap should slowly move upwards as it travels up the tube threads.
 3. The cap threads will eventually reach the end of the tube threads, at which point the cap will abruptly move downwards and make a clicking noise as the cap threads re-engage the lower level of the tube threads.
 4. Once this happens the cap is properly seated on the tube body and can be tightened as usual.
- By using this method, you can ensure that the cap threads and tube threads are engaged properly, and eliminate possible leakage caused by such issues as partial closure and cross-threading.

Cap Type

Cap Type	Image	Tube Volume	Material	Color	Description	Available in other Corning Items
Plug Seal		15 mL, 50 mL	HDPE	Orange	- Plug seal cap with flexible plugs - Push against the inside rim of the vessel - Contoured plug - Tight secure seal - Withstand pressures of 95 kPa (IATA air transport)	Some cell culture flasks, culture tubes, roller bottles, centrifuge tubes, and all round plastic storage bottles.
Corning CentriStar™		15 mL, 50 mL	HDPE	Orange	- Easy on/off flat top - Wider knurls and roll over edge design - Eliminates all seepage when used under recommended conditions	—
Dome Seal		15 mL	HDPE	Blue	- Dome seal features a screw on closure cap - Biologically inert - Double threaded cap to reduce cross threading - Interface/plug sealing ring - Retains liquid during routine laboratory procedures	—
Flat Top		50 mL	HDPE	Blue	- Solid flat top (phenolic style) - Ring on the inside of the cap to seal the inside rim of the vessel	Plastic cell culture flasks, roller bottles, Corning CellSTACK® chambers, spinner flasks, Erlenmeyer flasks, and some Corning CentriStar centrifuge tubes.
SnapLock/ Snap Cap		0.6 mL, 1.5 mL, 2.0 mL, 5.0 mL*	Polypropylene	Clear, amber, blue, green, orange, red, violet, yellow	- Assures efficient positive seal design - Thin membrane in cap center allows easy access to sample by syringe needle - Only one hand is needed for repeated opening/closing	—
Screw Cap		0.5 mL, 1.5 mL, 2.0 mL	Polypropylene	Clear, white, brown, red, orange, gray, pink, violet, green, blue	- Screw cap with O-rings ideal for long-term storage - Often used for storage of aliquoting reagents - Used for collection, processing, centrifugation, long-term storage, packaging/shipping of restriction enzymes and other reagents - Conical bottom or self-standing options are available.	—

* For 5 mL tubes, only clear and amber colors are available.

Characteristics of Corning Plasticware

	Polystyrene (PS)	Polyethylene (PE) (High Density)	Polypropylene (PP)	Polyethylene Terephthalate (PET)
PHYSICAL CHARACTERISTICS				
Basic Properties	Biologically inert, hard, excellent optical qualities	Biologically inert, high chemical resistance	Biologically inert, high chemical resistance, exceptional toughness	Biologically inert, hard, tough, excellent optical qualities
Clarity	Clear	Opaque	Translucent	Clear
Autoclave Results	Melts	May distort	Withstands several cycles	Melts
Heat Distortion Point	147-175°F 64-80°C	250°F 121°C	275°F 135°C	158°F 70°C
Burning Rate	Slow	Slow	Slow	—
EFFECTS OF LABORATORY REAGENTS				
Weak Acids	None	None	None	None
Strong Acids	Oxidizing acids attack	Oxidizing acids attack	Oxidizing acids attack	Oxidizing acids attack
Weak Alkalies	None	None	None	None
Strong Alkalies	None	None	None	Attacked
Organic	Soluble in aromatic chlorinated hydrocarbons	Resistant below 80°C	Resistant below 80°C	Soluble in aromatic or chlorinated hydrocarbons
GAS PERMEABILITY OF THIN WALL PRODUCTS*				
O ₂	Low	High	High	Very low
N ₂	Very low	Low	Low	Very low
CO ₂	High	Very high	Very high	Low

*Obtained from a table which lists gas permeability in CC/100 sq. inches per 24 hr./mil.

Portions of this table courtesy of Modern Plastics Encyclopedia. Most data are from tests by A.S.T.M. methods. Tables show averages or ranges. Many properties vary with manufacturer, formulation, testing laboratory, and the specific operating conditions.

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