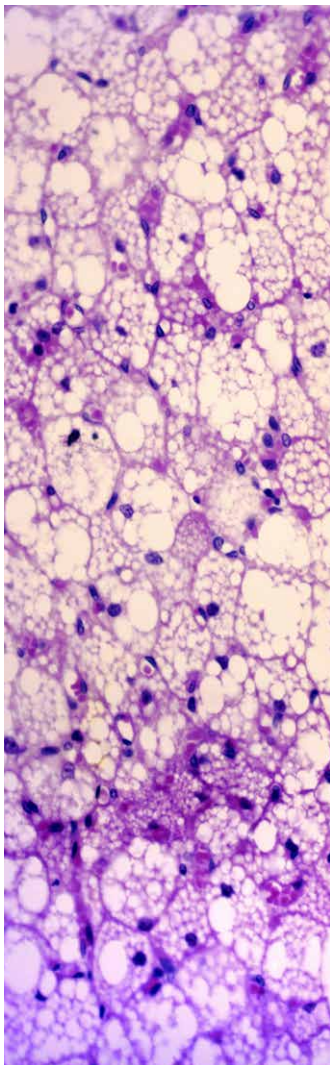
Corning® Sample Cooling and Heating Systems

A family of solutions that enables consistent, reproducible, and standardized sample handling

CORNING



Ensure temperature consistency and minimize contamination risk

It's well established that control and standardization of analytical processes is critical to successful research outcomes. However, often the pre-analytical steps are overlooked – although sample collection, handling, storing, and preparation steps are just as important to the overall success of downstream analysis. Variables like inconsistent sample temperature can result in misleading analytical results, which may slow down or ultimately jeopardize your research.

Corning's sample cooling and heating solutions enable consistent, reproducible, standardized temperature control with or without ice, electricity, or batteries. These solutions address the pitfalls of temperature regulation and reduce contamination risk, keeping your samples cool and stable while you work.

Reduce variability originating from tubes, plates, or wells placed directly into ice, dry ice, alcohol baths, water baths, and other cooling or heating temperature sources with Corning CoolRack® and Corning CoolSink® thermo-conductive modules.

The platform is flexible so you can select the right components for your application and working style. CoolRack and CoolSink modules may be placed in traditional Corning ice buckets and pans, or for an ice-free option, use with Corning CoolBox™ ice-free cooling systems. Regardless of your desired configuration, you can feel confident that you will keep your sample temperature stable and set your research up for success—right from the start.

Good –
Ice bucket with ice

Better –
Ice bucket with CoolRack

Best –
CoolBox with CoolRack

Corning® CoolRack® and Corning CoolSink® Thermo-conductive Modules

Corning CoolRack and CoolSink thermo-conductive modules reduce variability which originates from tubes or wells placed directly into ice, dry ice, alcohol baths, water baths, and other temperature sources. Place the thermo-conductive modules directly onto a temperature source between -196°C to >100°C and it will rapidly adapt to that temperature. Both CoolRack and CoolSink modules ensure +/- 0.1°C temperature uniformity across all tubes and plates when cooling, snap-freezing, heating, or thawing.

Suggested applications include: cooling reagents such as ECMs, like Corning Matrigel® matrix, restriction enzymes, dNTPs and antibodies, alcohol-free dry ice snap-freezing of tissue, virus and bacteria samples, and bench top cryogenic tube sorting in liquid nitrogen.

All thermo-conductive modules may be autoclaved, high heat sterilized, or decontaminated with bleach, alcohol, or other disinfectants or lab detergents. Certain CoolRack modules are SBS-compatible.

Increased Temperature Consistency

Non-uniform Plate Cooling with Crushed Ice

Final equilibrium well temperature for a 96-well flat bottom plate in direct contact with crushed ice. Colors represent 0.5°C temperature intervals of the corresponding plate wells from 4.5°C to 7.4°C.

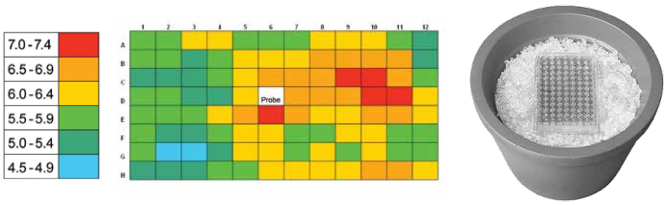


Plate directly on crushed ice, the plate does not reach 4°C in any of the wells and well-to-well temperature is uneven.

Uniform Plate Cooling with Corning CoolSink XT 96F Module

Corning CoolSink XT 96F on ice. Colors represent 0.5°C temperature intervals of the corresponding plate wells ranging from 2.5°C to 4.4°C. The white cell represents the well that was fitted with the thermocouple probe.

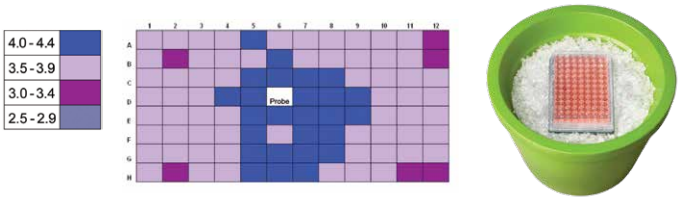


Plate placed on Corning CoolSink module and then placed on ice shows more uniform well-to-well temperature and all wells at or below 4°C. (Blue center plate wells are slightly warmer due to curvature of the underside of the plate).

Published in Biotechniques, November 2010.

Visit **corning.com/lifesciences** for more information on Corning CoolRack and Corning CoolSink versatility and performance.

Corning® ThermalTray™ Thermo-conductive Platforms

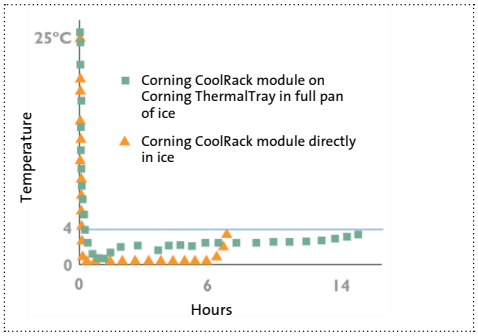
Corning ThermalTray thermo-conductive platforms support Corning CoolRack® and Corning CoolSink® sample modules in liquid temperature sources such as melting ice, water baths, and liquid nitrogen. Made of the same highly conductive alloy as CoolRack and CoolSink modules, ThermalTray platforms conduct the source temperature to the CoolRack or CoolSink and, ultimately, to your samples.

The stable, sturdy design makes them ideal for processing temperature-sensitive samples in melted ice baths or liquid nitrogen. All modules may be autoclaved, high heat sterilized, or decontaminated with bleach, alcohol, or other disinfectants or lab detergents.

Thermo-conductive Modules Versatility and Performance

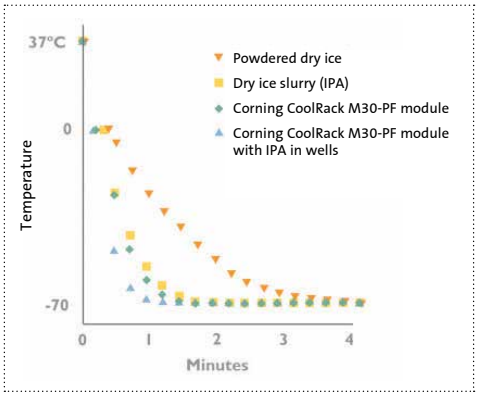
On Ice

- Adapts from ambient (25˚C) to <4˚C in 60 to 90 seconds*
- Samples and labels stay dry, organized
- Hours of ice cooling without direct ice contact
- Reproducible method



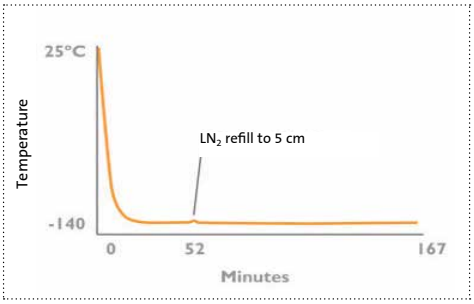
On Dry Ice

- Adapts from ambient (25˚C) to -78˚C in approximately 5 to 7 minutes*
- Eliminates ethanol from snap freezing
- Samples are upright and organized as they freeze
- Equal or better freezing rate as compared to direct immersion into dry ice or alcohol slurry
- Reproducible method



In Liquid Nitrogen (LN_2)

- Adapts from ambient (25˚C) to approximately -150˚C in approximately 12 to 14 minutes*
- Vapor barrier protects from ambient air
- Samples are upright and organized as they freeze
- No direct contact between samples and LN_2
- Reproducible method



With Heat Sources

- Use with water baths, incubators, and other heat sources to keep samples warm

*Average cooling rate from room temperature

Corning® CoolBox™ Systems

Corning CoolBox Systems are bench top cooling systems that provide sample cooling or freezing without ice, electricity, or batteries.

Versatile and accommodating to a variety of sample formats and temperatures, the CoolBox modular design enables the use of both Corning CoolRack® and Corning CoolSink® thermo-conductive sample modules to hold microcentrfuge tubes, cryogenic vials, PCR tubes, or assay plates at a stable temperature while you work.

Corning CoolBox

- Allows all-day cooling (up to 16 hours) or freezing (up to 8 hours) with one Corning XT Cooling Core
- Removes the need for trips to the ice machine; reduced risk of ice contamination
- Accommodates a wide array of sample tubes and plates
- Available in single- or double-capacity systems for a variety of applications

The internal cooling or freezing cores provide hours of 0.5°C to 4°C cooling or -20C to 0°C sample freezing. CoolBox systems may also be used with dry ice to create a compact, portable, snap-freezing workstation for bacteria, viruses, or proteins.

Corning Cool Box is available in a variety of configurations and is compatible with all of the Corning CoolRack and Corning CoolSink thermo-conductive sample modules.

Corning XT Starter is an open-platform cooler that accommodates most Corning CoolRack and Corning CoolSink modules, making it a versatile and flexible tool for a variety of applications. The low profile and small footprint make it ideal for use in the hood. XT Starter keeps samples cold (0.5°C to 4.0°C) for up to four hours. The 1°C to 8°C temperature indicator provides visual assurance of proper temperature. XT Starter includes: one Corning XT Holder base and one Corning XT Cooling Core. To extend the cooling duration, keep an additional XT Cooling Core in the freezer and replace the Core as needed.

Corning CoolBox XT systems are ideal as a benchtop cooling workstation. This system includes a base, collar, lid, and one Corning XT Cooling Core (accommodates one tube or plate sample module) which can be used for sample cooling and accommodates one tube or plate sample module.

Corning CoolBox 2XT systems include a base, collar, lid, and two Corning XT Cooling Cores which can be used for sample cooling. When using taller tube modules in the CoolBox XT/2XT systems, order an optional Corning Extension Collar to extend the height of the system and allow the lid to close. Choose from a selection of pre-configured systems or create your own configuration.

Corning CoolBox 30 systems accommodate all 30-well Corning CoolRack tube modules. Choose from a selection of pre-configured systems or create your own configuration.

Corning® Ice Buckets and Pans

For added convenience, Corning now offers recyclable, nontoxic ethylene-vinyl acetate (EVA) containers for use with ice, dry ice, or liquid nitrogen.

These multi-purpose containers are highly insulative, stackable, unbreakable, lightweight, and leak-proof. Containers will not “sweat” or deform and have a textured finish on the bottom to prevent slipping on the benchtop. Ideal for use with ice, dry ice (-78°C), liquid nitrogen (-196°C), alcohol or saline solutions, or warm solutions up to +93°C.

Available in five sizes and seven colors.

Ordering Information

Corning CoolRack® M Microcentrifuge Tube Modules

Cat. No.	Description	Capacity	Qty/Cs
432034	CoolRack M6, gray	6 x 1.5 or 2 mL microcentrifuge tubes	1
432035	CoolRack M6, green	6 x 1.5 or 2 mL microcentrifuge tubes	1
432036	CoolRack M6, orange	6 x 1.5 or 2 mL microcentrifuge tubes	1
432037	CoolRack M15, gray	15 x 1.5 or 2 mL microcentrifuge tubes	1
432038	CoolRack M15, green	15 x 1.5 or 2 mL microcentrifuge tubes	1
432039	CoolRack M15, orange	15 x 1.5 or 2 mL microcentrifuge tubes	1
432041	CoolRack M30, gray	30 x 1.5 or 2 mL microcentrifuge tubes	1
432042	CoolRack M30, green	30 x 1.5 or 2 mL microcentrifuge tubes	1
432043	CoolRack M30, orange	30 x 1.5 or 2 mL microcentrifuge tubes	1
432044	CoolRack M90	90 x 1.5 or 2 mL microcentrifuge tubes	1
432045	CoolRack M96 ID	96 x 1.5 or 2 mL microcentrifuge tubes with A to H and 1 to 12 row and column indexing	1

Corning CoolRack M-PF Conical Tube Modules

Cat. No.	Description	Capacity	Qty/Cs
432046	CoolRack 500 µL M30-PF	30 x 0.5 mL conical tubes	1
432047	CoolRack M15-PF	15 x 1.5 mL conical tubes	1
432048	CoolRack M30-PF	30 x 1.5 mL conical tubes	1

Corning CoolRack CF Cryogenic Vial and FACS Tube Modules

Cat. No.	Description	Capacity	Qty/Cs
432049	CoolRack CF15	15 cryogenic vials or FACS tubes	1
432050	CoolRack XT CFT24	24 cryogenic vials or FACS tubes, with "gripping" wells for one-hand vial opening/closing, SBS-compatible	1
432052	CoolRack CFT30	30 cryogenic vials or FACS tubes, with "gripping" wells for one-hand vial opening/closing	1
432051	CoolRack CF45	45 cryogenic vials or FACS tubes	1

Corning® CoolRack® PCR Microplate, Strip Tubes, or Tube Modules

Cat. No.	Description	Capacity	Qty/Cs
432053	CoolRack XT PCR96	96-well PCR microplate, PCR 12-strip tubes or microcentrifuge tubes, SBS-compatible	1
432055	CoolRack XT PCR384	384-well PCR microplate, SBS-compatible	1
432054	CoolRack XT M-PCR	12 x 1.5 or 2 mL microcentrifuge tubes or PCR 6-strip tubes, SBS-compatible	1

Corning CoolRack 96 Storage Tube Modules

Cat. No.	Description	Capacity	Qty/Cs
432056	CoolRack 96 x 0.5 mL	96 x 0.5 mL 2D bar code tubes	1
432057	CoolRack 96 x 1 mL	96 x 1.4 mL 2D bar code tubes	1

Corning CoolRack SV Sample Vial Modules

Cat. No.	Description	Capacity	Qty/Cs
432058	CoolRack SV2	12 x 5 mL sample vials	1
432059	CoolRack SV10	12 x 10 mL sample vials	1

Corning CoolRack Tall Modules

Cat. No.	Description	Capacity	Qty/Cs
432060	CoolRack XT 5 mL	12 x 5 mL centrifuge tubes, SBS-compatible	1
432061	CoolRack 15 mL	9 x 15 mL centrifuge tube	1
432062	CoolRack 50 mL	4 x 50 mL centrifuge tube	1
432063	CoolRack 250 mL PF	One 250 mL centrifuge tube	1
432064	CoolRack 250 mL	One 250 mL Easy Grip storage bottle	1
432040	CoolRack XT M24	24 x 1.5 or 2 mL microcentrifuge tubes, SBS-compatible	1
432068	CoolRack L	12 x 15 mL centrifuge tubes, light weight insulated module	1

Corning CoolRack V Blood Collection Tube Modules

Cat. No.	Description	Capacity	Qty/Cs
432065	CoolRack VS13	Nine 13 x 75 mm blood tubes	1
432067	CoolRack V13	Nine 13 x 100 mm blood tubes or 5 mL cryogenic vials	1
432066	CoolRack V16	Nine 16 x 100 mm blood tubes	1
432069	CoolRack LV	12 x 13 mm or 16 mm diameter tubes, light weight insulated module, thermo-conductive base and insulative exterior	1

Corning CoolRack and CoolSink® Plate and Reservoir Modules

Cat. No.	Description	Capacity	Qty/Cs
432139	CoolRack LX50	One Axygen® 50 mL disposable reagent reservoir (RES-V-50, RES-V-50-S, or RES-V-50-SI)	1
432070	CoolSink XT96F	One 6-, 12-, 24-, 48-, 96-, or 384-well flat bottom plate, SBS-compatible	1
432071	CoolSink XT96U	One 96-well U-bottom microplate, SBS compatible	1
432072	CoolSink LX55	One 55 mL reagent reservoir	1

Corning ThermalTray™ Thermo-conductive Platforms

Cat. No.	Description	For Use With	Qty/Cs
432073	ThermalTray SLP, slim, low profile	9L ice pan with liquid nitrogen	1
432074	ThermalTray LP, low profile	9L ice pan with crushed ice	1
432075	ThermalTray HP, high-profile	Water bath	1

Corning XT Starter Ice-free Coolers

Cat. No.	Description	Contains	Qty/Cs
432014	XT Starter, complete, purple	XT Holder and XT Cooling Core	1
432015	XT Starter, holder only, purple	XT Starter Holder only	1

Corning CoolBox™ XT Modules

Cat. No.	Description	Contains	Qty/Cs
432021	CoolBox XT, purple	Holder and one Cooling Core	1
432022	CoolBox XT, green	Holder and one Cooling Core	1
432023	CoolBox XT, orange	Holder and one Cooling Core	1
432024	CoolBox XT, pink	Holder and one Cooling Core	1
432025	CoolBox 2XT, purple	Holder and two Cooling Cores	1
432026	CoolBox 2XT, green	Holder and two Cooling Cores	1
432027	CoolBox 2XT, orange	Holder and two Cooling Cores	1
432028	CoolBox 2XT, pink	Holder and two Cooling Cores	1

Ordering Information (continued)

Corning® CoolBox™ Accessories

Cat No.	Description	Qty/Cs
432081	XT Cooling Core	1
432082	XT Freezing Core	1
432083	Extension collar for CoolBox XT, purple	1
432084	Extension collar for CoolBox XT, green	1
432085	Extension collar for CoolBox XT, orange	1
432086	Extension collar for CoolBox XT, pink	1
432087	Extension collar for CoolBox 2XT, purple	1
432088	Extension collar for CoolBox 2XT, green	1
432089	Extension collar for CoolBox 2XT, orange	1
432090	Extension collar for CoolBox 2XT, pink	1
432091	CoolRack Temperature Strip, 1°C to 8°C	3
432092	CoolRack Elastic Sleeves	4

Corning Ice Buckets, Round, with Lid

Cat No.	Description	Qty/Cs
432122	Ice bucket, round 4L, green	1
432123	Ice bucket, round 4L, blue	1
432124	Ice bucket, round 4L, red	1
432125	Ice bucket, round 4L, orange	1
432126	Ice bucket, round 4L, lime green	1
432127	Ice bucket, round 4L, pink	1
432128	Ice bucket, round 4L, purple	1
432129	Ice bucket, round 2.5L, blue	1
432130	Ice bucket, round 2.5L, green	1
432131	Ice bucket, round 2.5L, red	1
432132	Ice bucket, round 2.5L, orange	1
432133	Ice bucket, round 2.5L, lime green	1
432134	Ice bucket, round 2.5L, pink	1
432135	Ice bucket, round 2.5L, purple	1

Corning Ice Pans, Rectangular

Cat No.	Description	Qty/Cs
432093	Ice pan, maxi 9L, green	1
432094	Ice pan, maxi 9L, blue	1
432095	Ice pan, maxi 9L, red	1
432096	Ice pan, maxi 9L, orange	1
432097	Ice pan, maxi 9L, lime green	1
432098	Ice pan, maxi 9L, pink	1
432099	Ice pan, maxi 9L, purple	1
432100	Ice pan with lid, maxi 9L, blue	1
432101	Ice pan with lid, maxi 9L, lime green	1
432102	Ice pan with lid, maxi 9L, purple	1
432103	Ice pan, midi 4L, green	1
432104	Ice pan, midi 4L, blue	1
432105	Ice pan, midi 4L, red	1
432106	Ice pan, midi 4L, orange	1
432107	Ice pan, midi 4L, lime green	1
432108	Ice pan, midi 4L, pink	1
432109	Ice pan, midi 4L, purple	1
432110	Ice pan with lid, midi 4L, blue	1
432111	Ice pan with lid, midi 4L, orange	1
432112	Ice pan with lid, midi 4L, lime green	1
432113	Ice pan with lid, midi 4L, pink	1
432114	Ice pan with lid, midi 4L, purple	1
432115	Ice pan, mini, 1L, green	1
432116	Ice pan, mini, 1L, blue	1
432117	Ice pan, mini, 1L, red	1
432118	Ice pan, mini, 1L, orange	1
432119	Ice pan, mini, 1L, lime green	1
432120	Ice pan, mini, 1L, pink	1
432121	Ice pan, mini, 1L, purple	1

For more specific information on claims, visit the Certificates page at **www.corning.com/lifesciences**.

Warranty/Disclaimer: Unless otherwise specified, all products are for research use only. Not intended for use in diagnostic or therapeutic procedures. Corning Life Sciences makes no claims regarding the performance of these products for clinical or diagnostic applications.

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