

# CoolBox™

## Ice-Free Cooling and Freezing Systems



**CoolBox systems** are bench top cooling workstations that provide sample cooling or freezing *without ice, electricity or batteries!* CoolBox systems are versatile and can accommodate a variety of sample formats and temperatures. The modular design enables the use of CoolRack® and CoolSink® thermo-conductive sample modules to hold microfuge tubes, cryogenic vials, PCR tubes and plates, assay plates and more. The internal cooling or freezing cartridges provide hours of 0.5 to 4°C cooling or sample freezing. CoolBox systems may also be used with dry ice to create a compact, portable, snap-freezing workstation for bacteria, virus and proteins.



### Samples directly in ice

Non-reproducible method. Insulating air pockets create non-uniform temperatures. Unorganized and at risk of contamination.



### CoolRack® module on ice

Reproducible method. Alloy rapidly adapts to ice temperature and holds all samples at the same temperature. No direct ice contact.



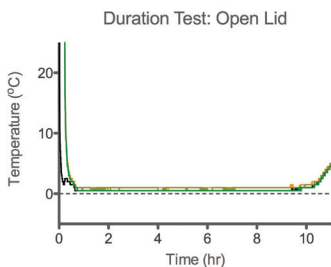
### Ice-free CoolBox™ XT workstation

Reproducible method. Uniform and consistent sample temperature up to 16 hours with re-usable cooling core. No ice, no batteries, no electricity.

## CoolBox Systems

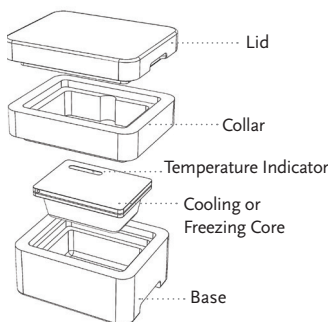
	CoolBox XT & 2XT	CoolBox MP	CoolBox 30	XT Starter
Holds Tubes	●	●	●	●
Holds Plates	●	●		●
0 - 4°C cooling with lid closed	16 hours	10 hours	10 hours	n/a
0 - 4°C cooling with lid open	10 hours	5 hours	4 hours	4 hours
<0°C freezing with lid open	5 hours		3 hours	
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## CoolBox Performance



CoolBox XT workstation performance with XT Cooling Core. Samples stay cold for over 10 hours with lid open and over 16 hours with lid closed.

## How It Works



Each CoolBox system consists of a base, cooling cartridge/core and a lid. CoolBox XT workstations also include a magnetized collar and a 1 to 8°C temperature indicator for visual assurance of proper temperature. Each CoolBox is designed to receive thermo-conductive sample modules that sit directly on the cartridge/core keeping samples at desired temperature for hours. The cartridge/core is pre-frozen in a -20°C freezer.

## Complete "Ready to Use" CoolBox Systems

Easily eliminate ice from your workflow by choosing one of these "ready to use" CoolBox ice-free cooling systems. Each system includes insulating box and lid, cooling cartridge or core, and sample module(s).



### Ordering Information

#### Complete CoolBox XT and 2XT Workstations

Application	For Use With	Description and Contents	Item No.	Box Color
Enzyme, PCR reagent or other biological specimen cooling	24 x 1.5 mL or 2.0 mL microfuge tubes	<b>MicroTube 24 CoolBox XT Workstation</b> CoolBox XT System, SBS-compatible CoolRack XT M24	BCS-576	●
Cell thawing, tissue culture	24 x 1.5 mL or 2.0 mL cryogenic vials (1.0 to 2.0 mL), with "gripping" wells for one-hand tube opening/closing	<b>CryoTube 24 CoolBox XT Workstation</b> CoolBox XT System, SBS-compatible CoolRack XT CFT24	BCS-575	●
PCR/qPCR plate preparation	One 96-well PCR plate, 12 strip wells or 96 0.2 mL tubes	<b>PCR96 CoolBox XT Workstation</b> CoolBox XT System, SBS-compatible CoolRack XT PCR96	BCS-570	●
PCR/qPCR strip well and reagent tube preparation	6 strip wells and 12 microfuge tubes (1.5 to 2.0 mL)	<b>PCR Strip CoolBox XT Workstation</b> CoolBox XT System, SBS-compatible CoolRack XT M-PCR	BCS-572	●
PCR/qPCR plate and reagent tube preparation	One 96-well PCR plate or strip wells or tubes and 24 x 1.5 mL or 2.0 mL microfuge tubes	<b>PCR Sample Preparation CoolBox 2XT Workstation</b> CoolBox 2XT System, SBS-compatible CoolRack XT M24	BCS-573	●

#### Complete CoolBox MP Systems

Application	For Use With	Description and Contents	Item No.	Box Color
PCR/qPCR plate preparation	One 96-well PCR plate or strip wells or tubes	<b>PCR96 CoolBox System</b> CoolBox MP System, SBS-compatible CoolRack XT PCR96	BCS-145	●
PCR/qPCR 384-well plate preparation	One 384-well PCR plate	<b>PCR384 CoolBox System</b> CoolBox MP System, SBS-compatible CoolRack XT PCR384	BCS-146	●
Tissue culture, cell staining, other assays	One 96-well or 384-well flat-bottom plate	<b>96F CoolBox System</b> CoolBox MP System, SBS-compatible CoolSink XT 96F	BCS-147	●
Bradford protein, other colorimetric or fluorescent assays	One 96-well u-bottom plate	<b>96U CoolBox System</b> CoolBox MP System, SBS-compatible CoolSink XT 96U	BCS-148	●

#### Complete CoolBox 30 Systems

Application	For Use With	Description and Contents	Item No.	Box Color
Enzyme, PCR reagent or other biological specimen cooling	30 x 1.5 mL or 2.0 mL microfuge tubes	<b>M30 CoolBox System</b> CoolBox 30 System, CoolRack M30	BCS-133	●
Enzyme, PCR reagent or other biological specimen cooling (conical 1.5 mL tubes only)	30 x 1.5 mL conical microfuge tubes	<b>M30-PF CoolBox System</b> CoolBox 30 System, CoolRack M30-PF	BCS-134	●
Cell thawing, tissue culture	30 x 1.0 mL or 2.0 mL cryogenic vials, with "gripping" wells for one-hand vial opening and closing	<b>CFT30 CoolBox System</b> CoolBox 30 System, CoolRack CFT30	BCS-166	●

## XT Starter



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

### XT Starter

Includes: (1) purple XT Holder and (1) XT Cooling Core. Accommodates one CoolRack or CoolSink sample module. (Order separately, see page 11-14)

Item No.	Description	Dimensions (L x W x H)
BCS-504	● XT Starter, purple	External: 16.3 x 12.1 x 6.1 cm
BCS-513	● XT Holder only, purple	
BCS-511	● XT Cooling Core	

## CoolBox XT and 2XT Workstations



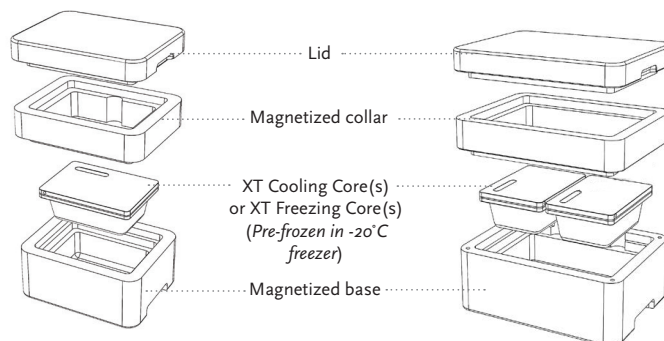
CoolBox XT and CoolBox 2XT workstations keep tube or plate samples cold for over 16 hours with the lid on, and over 10 hours with the lid off. Use optional XT Freezing Core to maintain frozen samples for up to 8 hours. Dry ice may be used in place of the cores to create a compact snap freezing workstation. CoolBox XT Microfuge 24 Workstation (left).



**CoolBox XT workstation**  
Holds one sample module



**CoolBox 2XT workstation**  
Holds two sample modules



### CoolBox XT Performance

Temperature Range	Cooling Source	Open Lid	Closed Lid
0.5°C to 4°C	XT Cooling Core	Over 10 hours	Over 16 hours
-20°C to 0°C	XT Freezing Core	Over 5 hours	Over 8 hours
-78°C	200 mL Dry Ice	Over 4 hours	Over 5 hours

### “Design Your Own” Workstation

#### CoolBox XT Workstation

Includes one (1) XT Cooling Core for 0.5 to 4°C cooling. Holds one (1) sample module. (Order separately from table on the right)

Item No.	Description	Dimensions (L x W x H)
BCS-502	● CoolBox XT, purple	Internal: 14.0 x 9.4 x 9.9 cm*
BCS-502G	● CoolBox XT, green	External: 20.0 x 16.0 x 15.0 cm
BCS-502O	● CoolBox XT, orange	
BCS-502PK	● CoolBox XT, pink	

#### CoolBox 2XT Workstation

Includes two (2) XT Cooling Cores for 0.5 to 4°C cooling. Holds two (2) sample modules. (Order separately from table on the right)

Item No.	Description	Dimensions (L x W x H)
BCS-503	● CoolBox 2XT, purple	Internal: 21.0 x 14.3 x 13.4 cm*
BCS-503G	● CoolBox 2XT, green	External: 26.5 x 20.0 x 15.0 cm
BCS-503O	● CoolBox 2XT, orange	
BCS-503PK	● CoolBox 2XT, pink	

\*Internal height of open space when core is in the base.

### Sample Modules for CoolBox XT and CoolBox 2XT Workstation

Note: All XT modules are SBS-compatible and may be placed on robotic instruments for brief cooling outside of CoolBox.

Item No.	Description	For Use With	Dimensions (L x W x H)
BCS-535	CoolRack XT M24	24 x 1.5 mL microfuge tubes	12.8 x 8.5 x 3.8 cm
BCS-534	CoolRack XT CFT24	24 x 1.0 or 2.0 mL cryogenic vials	12.8 x 8.5 x 3.8 cm
BCS-529	CoolRack XT PCR96	one 96-well PCR plate, strip wells, tubes	12.7 x 8.6 x 2.5 cm
BCS-523	CoolRack XT M-PCR	12 x 1.5 or 2.0 mL microfuge tubes /6 strip wells	12.7 x 8.6 x 3.8 cm
BCS-538	CoolRack XT PCR384	one 384-well plate	12.7 x 8.6 x 1.9 cm
BCS-265	CoolRack SV10	12 injectable cell therapy ampules	12.7 x 8.6 x 3.8 cm
BCS-536	CoolSink XT 96F	one 96 or 384-well flat-bottom plate	12.8 x 8.5 x 1.7 cm
BCS-537	CoolSink XT 96U	one 96-well u-bottom plate	12.8 x 8.5 x 1.7 cm

### Tall Tube Modules for CoolBox XT and CoolBox 2XT Workstation

Note: Tall modules require an XT Extension Collar for lid closing. See next page for details.

Item No.	Description	For Use With	Dimensions (L x W x H)
BCS-232	CoolRack L*	12 centrifuge tubes (15 mL), insulated	13.7 x 9.5 x 11.8 cm
BCS-153	CoolRack 15ml	9 centrifuge tubes (15 mL)	8.9 x 8.9 x 10.7 cm
BCS-154	CoolRack 50ml	4 centrifuge tubes (50 mL)	8.9 x 8.9 x 10.7 cm
BCS-235	CoolRack LV*	12 blood tubes (13x75 mm), insulated	13.7 x 9.5 x 9.6 cm
BCS-157	CoolRack VS13	9 blood tubes (13x75 mm)	8.9 x 8.9 x 6.1 cm
BCS-155	CoolRack V13	9 blood tubes (13x100 mm)	8.9 x 8.9 x 8.4 cm
BCS-156	CoolRack V16	9 blood tubes (16x100 mm)	8.9 x 8.9 x 8.4 cm

\*No XT Extension Collar necessary unless lid closing is required.

### CoolBox XT and CoolBox 2XT Optional Accessories



#### CoolBox XT Extension Collar

For use with CoolBox XT when using tall tube modules. Dimensions (L x W x H):

Internal: 14.0 x 9.4 x 7.0 cm  
External: 20.0 x 16.0 x 7.0 cm

Item No.	Description
BCS-502-C	● Extension Collar, purple
BCS-502-CG	● Extension Collar, green
BCS-502-CO	● Extension Collar, orange
BCS-502-CPK	● Extension Collar, pink



#### CoolBox 2XT Extension Collar

For use with CoolBox 2XT when using tall tube modules. Dimensions (L x W x H):

Internal: 21.0 x 14.3 x 7.0 cm  
External: 26.5 x 20.0 x 7.0 cm

Item No.	Description
BCS-503-C	● Extension Collar, purple
BCS-503-CG	● Extension Collar, green
BCS-503-CO	● Extension Collar, orange
BCS-503-CPK	● Extension Collar, pink



#### XT Cores

Item No.	Description
BCS-511	XT Cooling Core, For 0.5 to 4°C
BCS-512	XT Freezing Core, For below 0°C

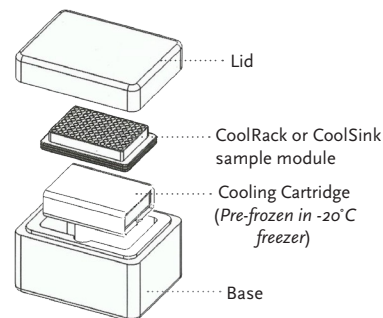
## CoolBox MP Systems



CoolBox MP system keeps sample tubes or plates cold (0.5 to 4.0°C) for approximately 10 hours with the lid closed, and approximately 5 hours with the lid open. To extend the cooling duration, keep an additional cooling cartridge in the freezer and replace the cartridge as needed.



CoolBox MP System



### CoolBox MP Performance

Temperature Range	Cooling Source	Open Lid	Closed Lid
0.5°C to 4°C	Cooling Cartridge	Up to 5 hours	Up to 10 hours
-78°C	200 mL Dry Ice	Up to 4 hours	Up to 5 hours

### “Design Your Own” System

#### CoolBox MP System

Includes: CoolBox MP base and lid, one blue cooling cartridge.

Accommodates one sample module  
(Order separately from table on the right.)

Item No.	Description	Dimensions (L x W x H)
BCS-144	● CoolBox MP, purple	Internal: 13.3 x 8.8 x 7.3 cm*
BCS-144G	● CoolBox MP, green	External: 20.3 x 15.25 x 15.25 cm
BCS-144O	● CoolBox MP, orange	
BCS-144PK	● CoolBox MP, pink	

\*Internal height of open space when core is in the base.

#### Cooling Cartridge

Item No.	Description
BCS-152	Cooling cartridge, blue, 1 per pack



#### Sample Modules for CoolBox MP System

Item No.	Description	For Use With	Dimensions (L x W x H)
BCS-125	CoolRack M15	15 x 1.5 or 2.0 mL microfuge tubes	10.2 x 6.4 x 3.8 cm
BCS-127	CoolRack M15-PF	15 conical 1.5 mL microfuge tubes	10.2 x 6.4 x 3.8 cm
BCS-535	CoolRack XT M24*	24 1.5 mL microfuge tubes	12.8 x 8.5 x 3.8 cm
BCS-126	CoolRack CF15	15 cryogenic vials	10.2 x 6.4 x 3.8 cm
BCS-534	CoolRack XT CFT24*	24 cryogenic vials, with "gripping" wells	12.8 x 8.5 x 3.8 cm
BCS-529	CoolRack XT PCR96*	one 96-well PCR plate or 12 strip wells	12.7 x 8.6 x 2.5 cm
BCS-523	CoolRack XT M-PCR*	12 x 1.5 or 2.0 mL microfuge tubes and 6 strip wells	12.7 x 8.6 x 3.8 cm
BCS-538	CoolRack XT PCR384*	one 384-well PCR plate	12.7 x 8.6 x 1.9 cm
BCS-536	CoolSink XT 96F*	one 96-well or 384-well flat-bottom plate	12.8 x 8.5 x 1.7 cm
BCS-537	CoolSink XT 96U*	one 96-well u-bottom plate	12.8 x 8.5 x 1.7 cm
BCS-231	CoolRack 96x0.5ml	0.5 mL 2D storage tubes	13.2 x 8.9 x 3.6 cm
BCS-149	CoolRack 96x1ml	1.4 mL 2D storage tubes	13.2 x 8.9 x 4.3 cm

\*All XT modules are SBS-compatible and may be placed on robotic instruments for brief cooling outside of CoolBox.

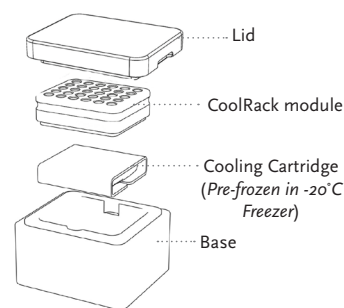
## CoolBox 30 Systems



CoolBox 30 System keeps sample tubes cold (0.5 to 4.0°C) for approximately 4 to 10 hours. Use the optional Freezing Cartridge to maintain frozen samples below 0°C for approximately 3 to 6 hours.



CoolBox 30 System



### CoolBox 30 Performance

Temperature Range	Cooling Source	Open Lid	Closed Lid
0.5°C to 4°C	Cooling Cartridge	Up to 4 hours	Up to 10 hours
-20°C to 0°C	Freezing Cartridge	Up to 3 hours	Up to 6 hours
-78°C	200 mL Dry Ice	Up to 4 hours	Up to 5 hours

### “Design Your Own” System

#### CoolBox 30 System

Includes: CoolBox 30 base and lid, blue cooling cartridge.

Accommodates 15-well or 30-well CoolRack tube modules.  
(Order separately from table on the right.)

Item No.	Description	Dimensions (L x W x H)
BCS-130	● CoolBox 30, purple	Internal: 12 x 10.4 x 7.9 cm*
BCS-130G	● CoolBox 30, green	External: 16.5 x 15.25 x 12.7 cm
BCS-130O	● CoolBox 30, orange	
BCS-130PK	● CoolBox 30, pink	

\*Internal height of open space when core is in the base.

#### Cooling Cartridge

For 0.5 to 4°C cooling

Item No.	Description
BCS-132	Cooling cartridge, blue, 3 per pack



#### Freezing Cartridge

For maintaining frozen samples below 0°C

Item No.	Description
BCS-131	Freezing cartridge, green, 3 per pack



#### Sample Modules for CoolBox 30 System

Item No.	Description	For Use With	Dimensions (L x W x H)
BCS-125	CoolRack M15	15 x 1.5 mL or 2.0 mL microfuge tubes	10.2 x 6.4 x 3.8 cm
BCS-127	CoolRack M15-PF	15 x conical 1.5 mL microfuge tubes	10.2 x 6.4 x 3.8 cm
BCS-108	CoolRack M30	30 x 1.5 mL or 2.0 mL microfuge tubes	12.0 x 10.2 x 3.8 cm
BCS-128	CoolRack M30-PF	30 x conical 1.5 mL microfuge tubes	12.0 x 10.2 x 3.8 cm
BCS-137	CoolRack M30-PF (500 uL)	30 x conical 500 uL tubes	12.0 x 10.2 x 3.8 cm
BCS-126	CoolRack CF15	15 x 1.5 mL or 2.0 mL cryogenic vials or 12x75 FACS tubes	10.2 x 6.4 x 3.8 cm
BCS-138	CoolRack CFT30	30 x 1.5 mL or 2.0 mL cryogenic vials or 12x75 FACS tubes, with "gripping" wells	12.0 x 10.2 x 3.8 cm

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