

# XT Starter

## Instructions for Use

### Introduction

XT Starter is a stationary device designed for maintaining sample temperatures below 4°C on the bench top without the use of wet ice, batteries or electricity. Patent-pending dual-phase conductive XT Cooling Core provides the cooling source when a thermo-conductive CoolRack or CoolSink tube or plate module is placed on top. The core and sample module in combination ensure uniform well-to-well temperature throughout the cooling period regardless of sample position. XT Starter can maintain sample temperature from 0.5 to 4°C for over 4 hours.

Temperature Range	Cooling Source	Cooling Duration
0.5 to 0.4	XT Cooling Core	Over 4 hours

Actual performance may vary depending upon CoolRack module employed, sample load, initial sample temperature, ambient temperature, air currents, and other conditions.

### Quick Start

- Remove XT Cooling Core from -20°C freezer and place on bench.
- When temperature strip on XT Cooling Core registers 1°C, place CoolRack® or CoolSink® sample module on top of XT Starter.
- Load samples in CoolRack or CoolSink modules.

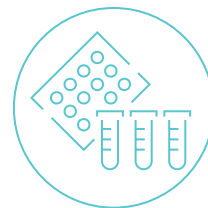
### Caution

- Place XT Starter with sample module in a safe place on the benchtop to prevent accidental spills.
- Avoid touching the top metal surface of the XT Cooling Core when removing from freezer.
- Condensation might occur during the cooling period. Simply wipe with a lab tissue to remove.

**Important:** To ensure your samples do not freeze and to get maximum cooling duration, please refer to the detailed instructions that follow.

### XT Starter Assembly

XT Starter consists of a high-density polyethylene foam holder and a reusable XT Cooling Core. When a CoolRack or CoolSink tube or plate module is placed on top of XT Cooling Core, the modules and samples rapidly equilibrate to the temperature of XT Cooling Core. Samples can be placed in the CoolRack or CoolSink module either before or after the module is placed on top of XT Starter.

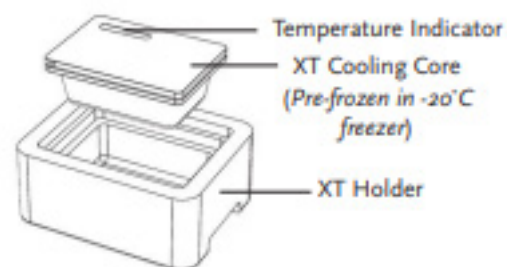


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## To Assemble:

- Freeze XT Cooling Core in a  $-20^{\circ}\text{C}$  freezer for at least 12 hours.
- XT Cooling Core should be stored in  $-20^{\circ}\text{C}$  freezer when not in use so it is ready when needed. **Note:** Freezing XT Cooling Core for less than the specified time may result in decreased cooling duration.
- Remove XT Cooling Core from the freezer and place on the benchtop for approximately 10-15 minutes. When the temperature indicator displays  $1^{\circ}\text{C}$  XT Cooling Core is ready to use. **Note:** Frost will form on the core exterior upon removal from the freezer; when the frost liquifies, the core is at proper temperature.
- Remove any condensation with a lab tissue and place XT Cooling Core into XT holder.
- Place a CoolRack or CoolSink module onto XT Cooling Core.
- Load samples.

Figure 1



## When using XT Starter to Cool Samples in a CoolRack Using a Charged XT Cooling Core

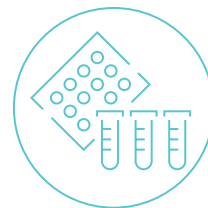
- Remove XT Cooling Core from the freezer and place into holder.
- Place CoolRack or CoolSink module directly onto core and allow to equilibrate to  $4^{\circ}\text{C}$  (approximately 10-15 minutes).
- Load samples.

## When using a Pre-chilled ( $4^{\circ}\text{C}$ ) CoolRack or CoolSink Module

- Remove XT Cooling Core from the freezer and place on the benchtop for approximately 10 minutes. When the temperature indicator displays  $1^{\circ}\text{C}$ , XT Cooling Core is ready to use.

**IMPORTANT:** Failure to allow XT Cooling Core to reach  $1^{\circ}\text{C}$  may result in sample freezing.

- Place XT Cooling Core into holder.
- Place the pre-chilled CoolRack or CoolSink module of choice onto the core.
- Load sample.



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## Care and Cleaning

The XT Starter holder is constructed from a cross-linked closed-cell dense polyethylene foam. The material has excellent resistance to fluid absorption and abrasion. Maximum temperature exposure: 60°C. Avoid prolonged exposure to UV light sources. All components (XT Holder and XT Cooling Core) can be cleaned with aqueous detergents, alcohol, 10% bleach, and acid/base viricide (such as Virkon S) solutions. Rinse with clear water after using cleaning solutions. Do not autoclave.

Part Number	Description	Dimensions (L x W x H):
BCS-504	XT Starter, purple	Exterior: 16.2 × 12.0 × 5.5 cm / 6.4 × 4.8 × 2.2 in
BCS-513	XT Holder, purple	
BCS-511	XT Cooling Core	