

Highlighting innovative design features
and useful application information for
Thermo Scientific XBF40D Series -40°C blast freezers

Thermo
S C I E N T I F I C

smart notes

design and innovation ▶ cold storage sample preparation



Q A

I need to prepare my samples for long-term storage. Is my -80°C ultra-low freezer designed to accomplish this task?

An ultra-low freezer is designed to **STORE** frozen samples for long periods of time. Using an ultra-low freezer to cool warmer samples can be strenuous to the freezer, not terribly effective, and may ultimately shorten the lifespan of the unit. In order to **PREPARE** your samples, there is a technique for rapidly freezing samples prior to long-term storage called “blast freezing.”



Blast freezing is accomplished by using a specially designed freezer that rapidly cools samples in preparation for long-term storage. Blast freezers are designed in such a way to quickly and effectively remove heat from a sample while minimizing the formation of ice crystals that can negatively impact the viability of cell membranes. Historically, blast freezers were designed exclusively for plasma storage*; however, more and more labs are looking for ways to prepare their samples safely and efficiently for long-term storage.

* For rapid plasma freezing, the Thermo Scientific XBF40D-MD is listed as a Class II medical device (product code KSE) with the US FDA, which is required for this application.

Thermo Scientific™ XBF40D Series blast freezers make it fast and easy to properly prepare your samples for long-term storage

NEW self-contained refrigeration system:

Plug and play design that fits in just about any place in your lab, without the need for custom installation or remote compressor systems

NEW, versatile design:

Adjustable stainless steel shelves accommodate a variety of vessels, including bags, bottles, carboys and more!

Exterior security features:

Lockable doors, audio and visual alarms including door ajar alarms limit user access and provide peace of mind.

UL certified:

All models meet safety standards in accordance with UL and can bear the cULus mark*

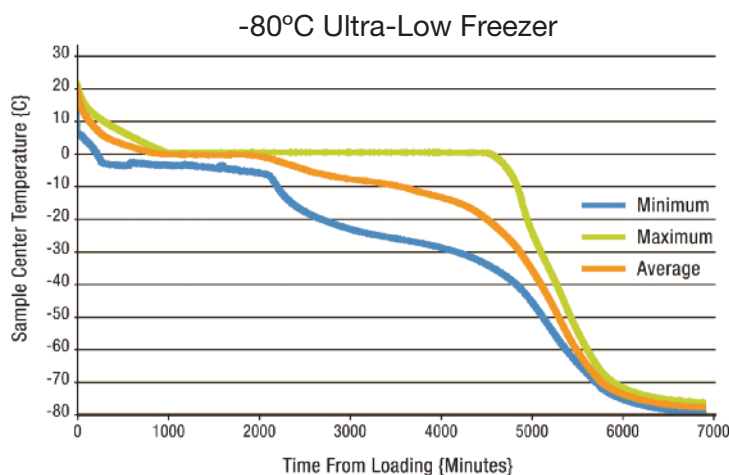
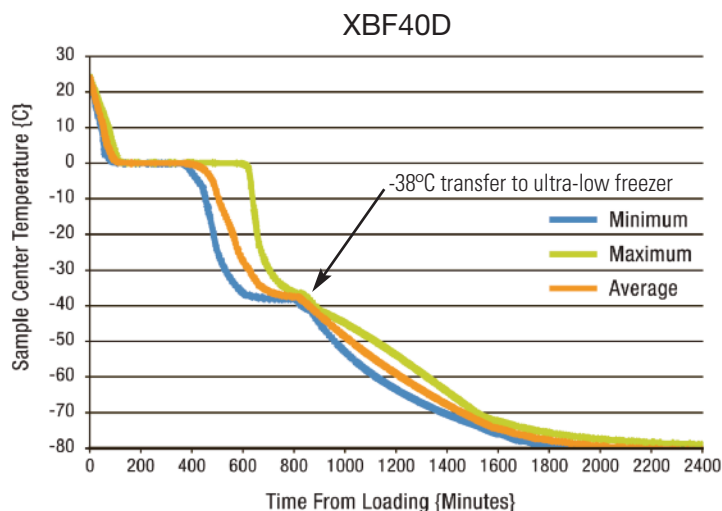
Summary:

The Thermo Scientific XBF40D Series of blast freezers offers a versatile design, capable of preparing a variety of products for long-term storage in almost every laboratory.

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** 24, 5L bottles filled with 3.5L of tap water, each loaded into an XBF40D (top chart) and a Thermo Scientific 600 box capacity -80°C freezer (bottom chart). Internal performance data, data on file. September 2014.

In a test comparing freezing times between the XBF40D and a -80°C ultra-low freezer, a group of 24, 5L bottles on average reached -70°C in the XBF40D 75% faster than the ultra-low freezer**



Learn more about the Thermo Scientific XBF40D Series, visit thermoscientific.com/cold



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