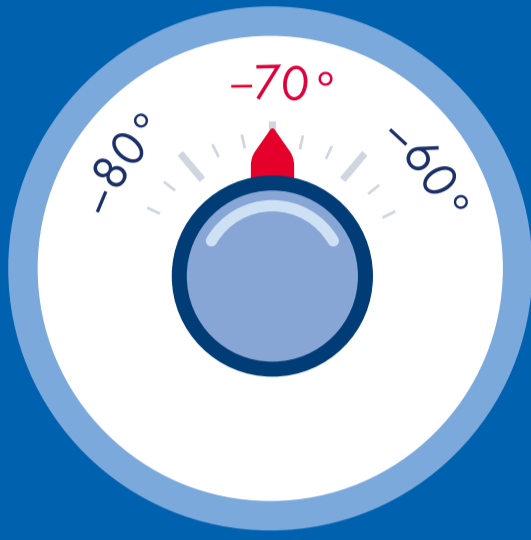
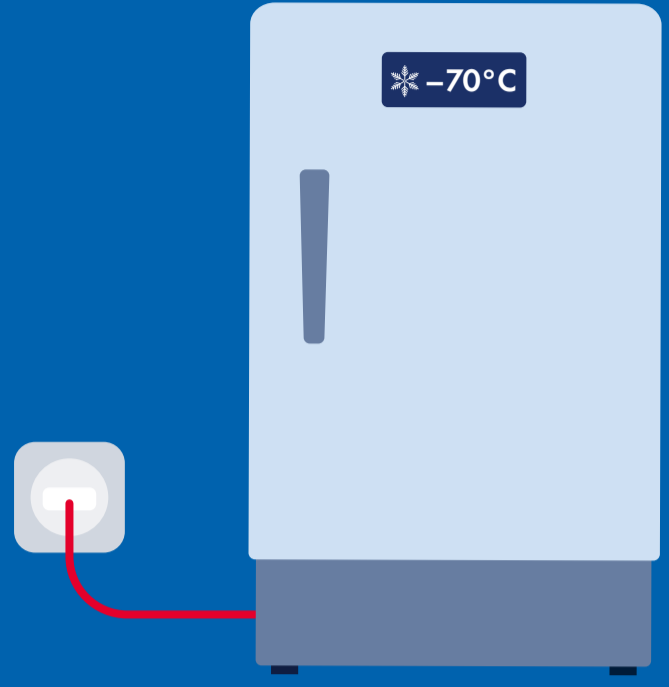


# Top 3 Energy-Saving Tips for Your Lab: Freezers

Saving energy in the lab is a great way to help the environment and reduce your costs. Did you know that ultra-low temperature (ULT) freezers, particularly older models, can consume about 25–30 kWh of energy per day, which is as much energy as an American home uses daily (1)?

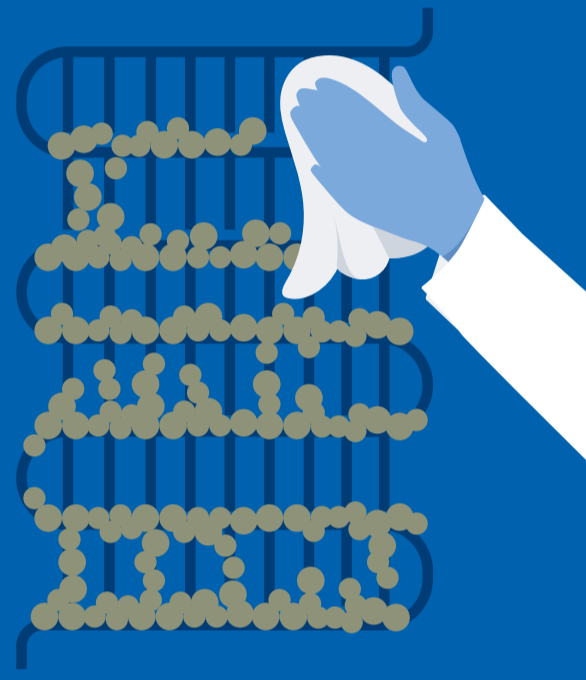


## 1 Save up to 30% energy

Chill up your freezer from  $-80^{\circ}\text{C}$  to  $-70^{\circ}\text{C}$  to save up to 30% energy (2, 3). To check if your samples are compatible with  $-70^{\circ}\text{C}$ , see reference 3.

## 2 Save an extra 10% energy

Clean coils and clean or replace filters to ensure they can exchange heat efficiently (1).



## 3 Clean out your freezer

A study conducted in labs at the University of California, Davis and the Centers for Disease Control and Prevention (CDC) indicated that 10–30% of items kept in cold storage may be obsolete or nonviable (2).



### Take sustainability to the next level

Discover eco-friendlier alternatives of our most popular sample extraction kits at [www.qiagen.com/qiawave](http://www.qiagen.com/qiawave)



## More tips to explore

- Store DNA at  $-20^{\circ}\text{C}$  to save up to 80% energy compared to using a ULT freezer (1)
- Conduct regular maintenance on your freezers, such as checking the door seals, to ensure they run efficiently
- Upgrade to energy-efficient models when purchasing new freezers
- Check if your samples and reagents can be stored at room temperature
- Shorten door opening time by having a searchable electronic inventory system
- Regularly defrost manual-defrost freezers
- Use timers or temperature monitoring systems to ensure freezers are not left running unnecessarily
- Keep freezers in well-ventilated areas to dissipate heat and reduce the load on the cooling system
- Retire or turn off freezers when not in use for extended periods
- Share cold storage units with other research groups to maximize use
- Maximize space by using a rack system and high-density storage

### Reference:

- 1 Top 9 Actions To Take in the Lab to Improve Energy Efficiency (mygreenlab.org)
- 2 Best Practices Overview - International Laboratory Freezer Challenge
- 3 Lab Energy Efforts - Freezers - (www.colorado.edu)
- 4 International Laboratory Freezer Challenge
- 5 Energy Efficiency and Considerations for Upgrades

Trademarks: QIAGEN®, Sample to Insight®, (QIAGEN Group). Registered names, trademarks, etc. used in this document, even when not specifically marked as such, are not to be considered unprotected by law. QPRO-2879 April/2023 © 2023 QIAGEN, all rights reserved.

Ordering [www.qiagen.com/shop](http://www.qiagen.com/shop) | Technical Support [www.support.qiagen.com](http://www.support.qiagen.com) | Website [www.qiagen.com](http://www.qiagen.com)