

Take the 2020 NIH Freezer Challenge!

The Sustainability Management Team is challenging all NIH labs to go above and beyond the NIH Freezer Policy by adopting new methods for managing freezers! Labs interested in participating in this challenge should register for the 2020 NIH Freezer Challenge, which will run from January 1 to April 1, 2020.

[Sign up for the 2020 NIH Freezer Challenge here!](#)

The goal of this challenge is to increase the reliability and decrease the energy consumption of freezers at the NIH. Participation in the 2020 NIH Freezer Challenge is voluntary. The challenge is open to lab-grade and ULT freezers of any age. Labs must meet a few minimum requirements for their ULT freezers (listed below) to be eligible to participate in the challenge initiatives. Participants have the freedom to complete one or more of the challenge initiatives for their freezers.

Minimum Requirements for ULT Freezers (from the [NIH Manual Chapter 26101-16](#)):

1. New ULT freezer purchases must be Energy Star Certified
2. All ULT freezers must be listed in the NIH Property Database
3. ULT freezers must have a [preventative maintenance](#) every six months

Challenge Initiatives (choose one or more):

1. Conduct a complete freezer defrost
2. Discard samples that are no longer needed
3. Transfer long-term samples to liquid nitrogen freezers
4. Maintain an electronic sample inventory
5. Barcode samples
6. Consolidate samples
7. Share freezer space with other researchers
8. Retire unnecessary freezers
9. Change the ULT freezer temperature to -70°C
10. Store samples at appropriate temperatures
11. Adopt room temperature sample storage

This year's challenge hopes to build off the promising results from the first NIH Freezer Challenge from last year (2019). In the 2019 challenge, eight labs and one bio-repository combined to discard 12,000 samples, defrost 26 freezers and retire three freezers. These results are estimated to save the NIH approximately \$12,500 per year in energy savings and eliminate 48 metric tons of annual greenhouse gas emissions. There were also benefits for research, such as extra freezer space and increased freezer reliability. Actions like defrosting your freezer and changing the temperature to -70°C (in addition to regular preventative maintenance) reduce the strain on your freezer's compressor.^{1,2} This helps increase the life of your freezer and decrease the risk of failures. The full results from the 2019 NIH Freezer Challenge are available [on the NEMS website](#).

The NIH plans to submit the results from the 2020 NIH Freezer Challenge to the 2020 International Laboratory Freezer Challenge hosted by the [International Institute for Sustainable Laboratories \(I²SL\)](#). Last year's results earned a second-place finish with only 9 participants! We are hoping increased

participation in the 2020 Challenge will be enough to earn first-place! Please send any questions regarding the 2020 NIH Freezer Challenge to [Jaro Sebek](#).