NIH GREEN ZONE NEWSLETTER

The Newsletter of the NIH Environmental Management System

JULY 2019

The 2019 NIH Freezer Challenge

Beginning in 2019, the NIH has started a yearly freezer challenge within the intramural research community. The inaugural challenge ran from January 1 to April 1 of 2019. Labs were challenged to go above and beyond the NIH Freezer Policy to increase freezer reliability and reduce energy consumption. Labs that volunteered to participate in the challenge were asked to choose and adopt one or more initiatives from a set of freezer management techniques (the complete list of initiatives is shown here). The choices ranged from freezer maintenance options, like performing a freezer defrost, to laboratory best-management practices, like discarding samples that are no longer needed.

In total, eight labs and one bio-repository agreed to participate in the 2019 NIH Freezer Challenge, representing many different ICs. The participating ICs included NCI, NHGRI, NIA, NIDCD, NIDDK, NIEHS and NINDS.

CHALLENGE INITIATIVES	TOTAL
ULT Freezer Temperature Changed from -80°C to -70°C	18
Freezer Defrosted	26
Freezer Retired	3
Unnecessary Samples Discarded	11,749
Samples Transferred to Liquid Nitrogen Freezers	20,521
Samples Consolidated	1,003

Actions like increasing your freezer's temperature to -70°C and performing a complete defrost help save energy, while also decreasing the strain on your freezer's compressor. Reducing the strain on the compressor increases freezer reliability, helping to protect years of precious research! In addition to increasing reliability, the Freezer Challenge initiatives will save the NIH approximately $12,647 per year in energy savings and eliminate 48 metric tons of annual greenhouse gas emissions.

Another result from the Freezer Challenge is that over 11,000 old samples were discarded! The added room from disposing unneeded samples makes it easier to find current samples and opens up space for new samples. While the effects of these activities are not always easy to quantify, it is clear the 2019 NIH Freezer Challenge has created significant benefits for the labs that participated, the environment and the NIH.

The 2019 NIH Freezer Challenge illustrates the power each lab has to make a positive change towards improving the reliability of their research practices and protecting the environment. Considering the relatively small number of labs that participated in this year's challenge, imagine what could be achieved if the entire NIH joined in! The results of the 2019 NIH Freezer Challenge are promising and have been submitted to the International Institute for Sustainable Laboratories (I^2SL) International Laboratory Freezer Challenge, which will allow our lab's efforts to contribute to a global initiative. In the coming years, we hope to expand our challenge even further to show what the NIH is truly capable of achieving! You can learn more about the freezer challenge and sign up for next year's challenge at the following link: The NIH Freezer Challenge!

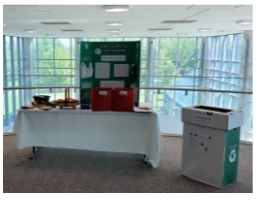
TAKE ACTION

Report Your Freezer Failures

The NIH is analyzing Ultra-Low Temperature (ULT) freezer failures that occur within NIH facilities to identify trends in freezer failures and freezer reliability. We are asking all NIH labs to report ULT freezer failures to help with this task.

LEARN MORE

STAFF SPOTLIGHT



Join the NIH Sustainability Community

Do you have ideas for making the NIH more environmentally-friendly? Would you like to participate in or organize activities to help the NIH achieve its sustainability goals? If so, then consider joining the NIH Sustainability Community!

LEARN MORE

NEMS TRAINING

Did you know? Ultra-low temperature freezers tuned to -70°C instead of -80°C consume up to 40% less energy.[1] To learn more about freezer management at the NIH, please visit the NEMS Training webpage to view a short (20 minute) NIH environmental awareness training video.