

CDC Wins the 2017 I2SL North American Freezer Challenge

Six CDC laboratories competed in the FY 2017 North American Laboratory Freezer Challenge (NALFC) along with 1,300 private and public laboratories. CDC's participating laboratories won the FY2017 NALFC award for the government sector. In addition to the government sector award, Deanna Jones, Ph.D, and the Elemental Analysis lab team in the Division of Laboratory Sciences won the individual laboratory award.

CDC's six labs cleaned out or removed 8,798 samples from cold storage units. By eliminating samples, they were able to consolidate the remaining samples and retire 21 ULT freezers. The CDC also raised the temperature setting from -80 °C to -70 °C on 44 ULT freezers. Increasing the temperature from -80 °C to -70 °C decreased the electricity consumption and cooling cost requirements by approximately 30 percent.

CDC's combined energy savings from the ULT freezer initiatives implemented as part of the 2017 NALFC is **367,400 kWh/year**. The energy cost savings is reached by multiplying the energy savings by CDC's electricity rate of \$0.055/kWh for an annual saving of **\$20,207/year**. Retiring 21 ULT freezers results in a maintenance avoidance cost of \$750/year per freezer for a total of **\$15,750/year**. Reducing the number of ULT freezers needed for storage results in a cost avoidance to purchase replacement freezers. ULT freezers cost approximately \$15,000 and have a 10-year life span, therefore the annual ULT replacement avoidance savings is \$1,500/year per freezer. Retiring 21 ULT freezers results in an annual replacement cost avoidance of **\$31,500/year**. Combining the annual energy, maintenance and replacement cost savings equals a total savings of **\$67,457/year**.

In addition to cost savings, laboratories benefit from consolidated space, improved researcher access to specimens, and improved security for viable samples.