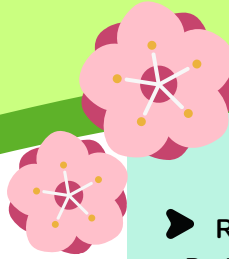


SPRING FREEZER CLEAN OUT!



Good Management Practices

► Full Defrost of Freezers

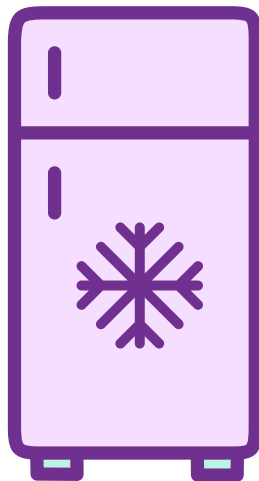
When you cannot easily remove ice from the interior or doors of a freezer, it might be time for a full defrost. You will need to move all the samples in the freezer to a different freezer unit. Turn the freezer off, let it completely thaw which might take several days (over a weekend is ideal), clean the interior, then power the freezer back on and put your samples back. Keeping up with brushing the frost out will ensure you don't have to do a full defrost as often.

Share Cold Storage Units!

Sharing equipment is an extremely effective way of reducing the costs of a lab. By sharing sample space in a refrigerator or freezer, you've likely not only saved money, but you're also going to earn points in this challenge.

► Sample Inventory

Detailed inventories reduce the likelihood of misplacing samples, and can improve sample access speed. Inventories include information about samples and may be paper or electronic. Update them periodically to include the most recent sample additions and removals. Even better, have a searchable electronic cold storage inventory system! Searchable sample inventories reduce time spent locating samples and shorten freezer opening times, increasing equipment efficiency and workflow.



Try Barcoded Inventories!

Barcodes are an excellent way to keep track of samples! Any refrigeration units that contain barcoded samples should be accounted for in this section on the scoresheet.

► Clean Out Unneeded Samples

Freezer clean-outs conducted in labs at UC Davis and the CDC indicate that 10-30% of items stored in cold storage units are no longer needed or viable. Try dedicating a bit of time each month to going through boxes, racks, and shelves, eliminating samples that are expired, mislabeled, or unidentifiable. Don't forget to update your inventory!

► Retirements and Upgrades

Retiring or unplugging unneeded cold storage units is the ultimate way to save energy and space. After your sample clean-out, you might be surprised how much space is opened up! Cold storage units must be fully retired or expected to be unplugged for at least one year to receive credit. If you have a glass door refrigerator you may count each door as a separate unit - that's how energy-intensive they are!

When it's time to upgrade your freezer or refrigerator, consider adding energy-efficiency to the list of important criteria. Any new units that use less energy than the units that they are replacing are eligible for credit in this challenge!



Quick Tips

Want to go above-and-beyond standard cold storage best practices? Incorporate some of these ideas into your lab's daily routine and watch the points add up... and the time you spend rooting around for samples go down!

► Temperature Tuning

Simply being mindful of sample storage conditions can have a huge impact on energy use in the lab. One ultra-low temperature freezer can consume as much energy as a single-family home **every day!** Anything you can do will help to significantly reduce energy consumption.

Many reagents and samples do not require storage at ultra-low temperatures (-70 C or -80 C). Consider storing DNA in a standard -20°C freezer - these freezers consume 80% less energy than ULT freezers.

► Try Room Temperature Sample Storage (RTSS) for Samples and Reagents

RTSS is becoming more common for DNA, RNA and plasmids. It is particularly useful for shipping (eliminating the need for dry ice), or in field collection (eliminating the need for refrigeration). Credit will be given for trying RTSS per well plate, set of 25 tubes, or number of 2" boxes.

