

STANDARD OPERATING PROCEDURE

Soil and Sample Storage and Retrieval Protocol (-80C)

Zhou Lab, Institute for Environmental Genomics

Joy Van Nostrand, Lab Manager
2030 SRTC, 5-4403
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Minimum Personal Protective Equipment Required: Glove, Lab coat, Long pants, Closed toed shoes

Special Handling:

Samples/soils that will be stored long-term must be in plastic sample boxes. The cardboard boxes should only be used for -20C or 4C storage or for short term storage in your personal storage area.

All storage freezers will be locked, and you will need to check samples in and out.

Common use freezers (A, K, M, and P) will remain unlocked but should only be used for samples you are currently using. Any soil or DNA samples that you are no longer actively using should be transferred to long-term storage.

Protocol/Procedure:

Storing Samples

If you plan to receive or collect samples that must be stored in the -80C freezer, alert the lab manager ahead of time. You will need to know how many samples and the approximate quantity of each sample.

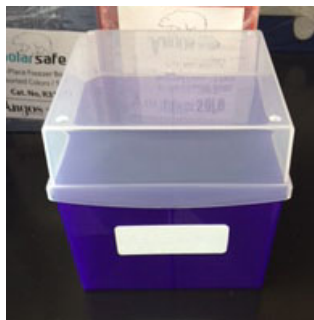
Lab manager will locate storage space for the samples and let you know what type of container you should store the samples in.

Soil samples should be stored in soil boxes. If the soil samples are too large to fit in the soil boxes, discuss options with lab manager.

Freezer boxes are in the tip area

Freezers J, S, T, Y, Z

These freezers have special racks and require smaller boxes than the other freezers:



Soil box



DNA/sample box

Other Freezers

The other freezers hold standard freezer racks and can hold larger freezer boxes



Soil box



DNA/sample box

No other types of containers should be used to store items in the freezers.

Labeling

Our new inventory system uses codes to label the sample boxes. The code indicates the exact location of the box (freezer, shelf, rack, and slot).

Box X2B5 is in Freezer X, second shelf, second rack, fifth position

The lab manager will provide a list of location codes for your samples.

The boxes should be prelabeled with the appropriate code using a **black Sharpie** (other colors or markers will wipe off over time). Do not add any additional labeling to the box. All that information will be in the inventory database.

Fill the boxes with as many samples as you can, but do not overfill the box. Make sure the lid closes completely and the box will easily slide into the rack.

You will need to create an inventory of each box as you fill it.

Write the box code on a sheet of paper and then list all the samples placed in that box.

Make sure it is clear which samples are in which box

For example,

U3C2 - Sample 1
Sample 2
Sample 3
Sample 4

U3C3 - Sample 5
Sample 6
Sample 7
Sample 8

If the sample identification information is long (e.g., New Warming Site, 2019, Block 1, Plot 2, warming, $\frac{1}{2}$ precipitation) you can use a shorter sample name as long as you can still identify which sample it is (e.g., Plot 2 or Block 1, Plot 2).

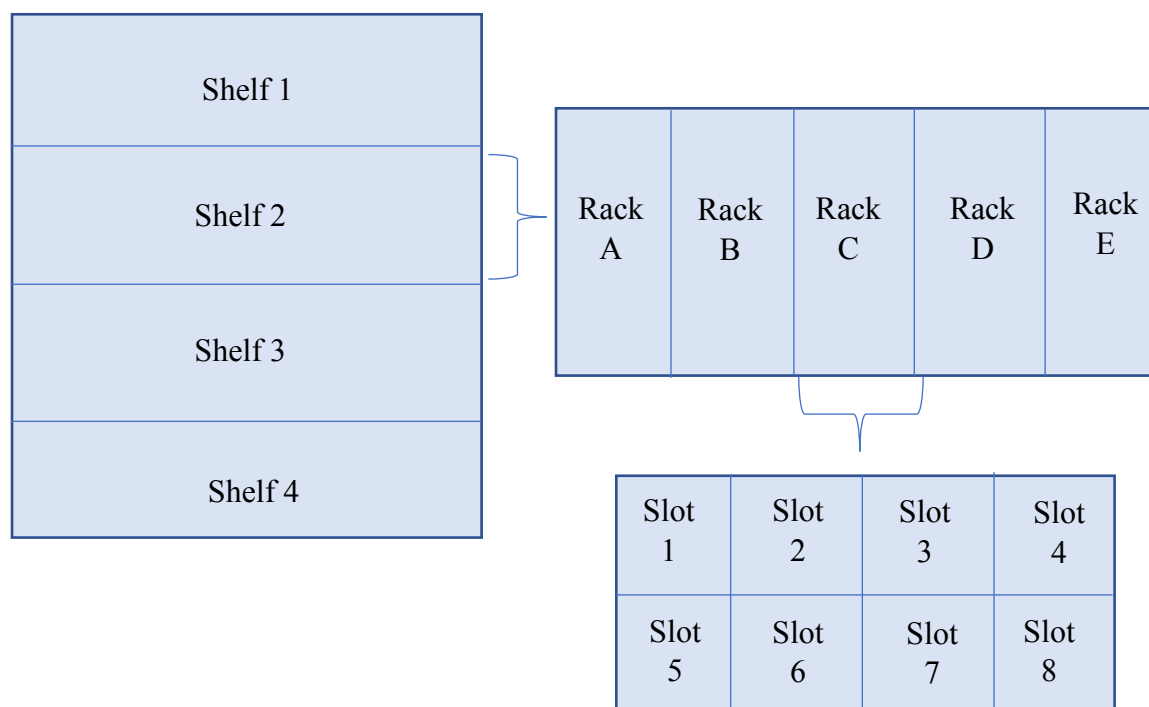
Transfer the inventory to an Excel sheet. Include site information, sampling year, experimental conditions, and any other pertinent information to the Excel sheet.

Email the Excel form to the lab manager (Joy Van Nostrand) so it can be uploaded into the inventory database.

Place filled boxes into their correct location.

Freezers are labeled with letters

Box X1E4 = Freezer X, Shelf 1, Rack E, Slot 4



Retrieving Samples

If you need samples from the freezer, log into the sample database (link on Lab Manager page of IEG website; username: ieg user; password: ieg123) and locate the sample boxes you need.

Submit this list to the lab manager and she will retrieve the samples for you.

You will receive a spreadsheet listing all the samples you requested.

You should add any missing project information, if you have it

Weigh all the samples in the box(es) to get remaining weight

Add information on what assays have been done, who worked on the samples, etc.

Indicate final weight of remaining sample

Once you are done with the samples, email the updated spreadsheet to the Lab Manager and indicate you are ready to check the samples back in. The Lab Manager will update the database and return the samples to storage.