

Soil Processing

1. Bring soils back to the lab.
2. Weigh 10 empty plastics bags and record weights in lab notebook. We will later take an average and subtract from our pre and post homogenized wet soil weights.
3. Weigh entire bag plus the wet soil on a balance and record the weight in the lab notebook.
4. Homogenize the sample by breaking up the soil with your hands (wear gloves).
For Mineral soils (FF):
 - Remove roots, set aside in labeled weigh boat
 - Remove coarse fraction (>2mm diameter) and weigh. **SAVE??**
 - Remove invert and count; record in lab notebookFor Organic soils (C):
 - Remove roots and place in 2mm sieve. Rub roots on sieve and collect any soil that goes through sieve. Place soil back into bag. Set roots aside in labeled weigh boat.
 - Remove moss and weigh
 - Remove invert and count; record in lab notebookRoot processing:
 - Soak roots in H₂O, pat dry with paper towel and weigh. Record weight in lab notebook.
 - Wrap roots in damp paper towel and place into labeled plastic bag. Store in the refrigerator to look for mycorrhizae.
5. Reweigh post-homogenized wet soil and bag and record weights in lab notebook.

Subsampling for MINERAL Soils:

6. At balance, subsample for GWC (gravimetric water content) by first taking the weight of a pre-numbered soil tin.
7. Record tin number and tin weight on weighing spreadsheet.
8. Tare tin weight.
9. Weigh out 10 g of wet soil into the tin. Record wet soil weight.
10. Set tin with soil aside.
11. Subsample for N-mineralization by placing a specimen cup labeled with sample ID and "T0" on balance.
12. Tare cup weight and then weigh out 10g of field moist soil.
13. Record weight on spreadsheet.
14. Repeat this same procedure for a "T1" cup.
15. Cap both cups and set aside for further processing.
16. Subsample for MB-N by placing a specimen cup labeled with sample ID and "MB-N" on balance.
17. Tare cup weight and then weigh out 10g of field moist soil.
18. Record weight on spreadsheet.
19. Cap cup and set aside for further processing.
20. Subsample for MB-P by placing a 50ml plastic centrifuge tube labeled with sample ID and "MB-P UF" on balance.

21. Tare tube and then weigh out 1mg of field moist soil.
22. Record weight on spreadsheet.
23. Cap tube and set aside for further processing.
24. Repeat this same procedure for "MB-P F" sample.
25. Subsample for CN by scooping out ~10g of soil into a coin envelope labeled with sample ID and "CN". NOTE: You do not need to record the weight.
26. CN samples need to be dried in the oven at 60C for a minimum of 48hours.
27. Do not record dry wt. Set aside to be sent back to Florida.
28. Subsample for air dried soil by placing a minimum of 10g of soil into a paper bag labeled with sample id and "Air Dry". NOTE: if you do not have a lot of soil left just go ahead and dump the remaining soil into the bag. You do not need to record any weights.
29. Leave bags open to air dry in an air-conditioned lab in a place where they will not be disturbed.
30. Let them air dry until they need to be sent back to Florida.

Subsampling for ORGANIC Soils:

Subsampling for organic soils will be the same as mineral except for two differences.

1. For GWC you will only need to weigh out 5g of soil into tins. These soils will get dried at 60C instead of 110°C.
2. Do not weigh out soil for CN. We will save the 60°C dried soil from GWC for CN.

NOTE: *Make sure to clean measuring spoon, spatula, etc with ethanol between each soil sample!*