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Gravimetric Soil Moisture Procedure

Materials:

- Aluminum weigh boats (tins)
- Analytical balance
- Drying oven set to 105 °C
- Sample spoon
- Pencil
- Lab Notebook

Procedure:

1. Place a labeled tin on the balance.
2. Record the tin number and the tin weight.
3. Add 50g of soil to the tin and record the exact weight. You only need to do this once per sample.
4. Place the soils in the oven at 105 °C for 48 hours. Note: You can let the soils sit for a few days as long as you recorded the wet weight, first there is no rush to get them in the oven.
5. Once the soils are dry, re-weigh the tins plus dry soil. Record the weight.

Calculations and example spreadsheet:

ID	Tin Weight (g)	Wet Weight (g)	Wet Weight + Tin (g)	Dry Weight Soil + Tin (g)	Dry Weight (g)	Grav. %wet wt
001	5.351	50.363	55.714	43.694	38.343	23.9
002	5.351	50.416	55.767	43.794	38.443	23.7
003	5.351	50.608	55.959	43.982	38.631	23.7

1. Dry wt = (tin wt + dry soil wt) – tin wt
2. Gravimetic soil moisture (%) = [(wet wt – dry wt)/ wet wt] *100