

Testing pH value of soil at Waihe'e Coastal Refuge Grade 5, Feb 2017

Name:

Classroom Teacher:

Your group will be responsible for determining the pH value for 2 different locations. Enter your results on the chart below. Once three samples are tested for each location, calculate the average pH value for that location.

Sample Location	pH value A	pH value B	pH value C	Average pH value (A+B+C/3)
Pine Forest				
Shower				
Trail Low				
Out-planting				

Were there any anomalies (“out-lyers”) in the data- values that stood out from the others? What may cause that? _____

Why did we test a sample from each location three times? _____

What location had the most acidic soil, what was the average value at that location?

What location had the most alkaline. Basic soil, what was the average value at that location?

(post values on map, note any possible contributing factors)

Steps to prepare and test a soil sample for pH value

(each team consists of 4 technicians, switch roles tech 1,2 with tech 3,4 for each sample tested)

1. Select a sample and note location on the data sheet (group)
2. Add one level measure spoon of the material onto the _____ sieve. (tech 1,2)
3. Measure _____ of the sifted sample to the glass beaker which has been labelled with tpe to show sample location. (tech 1,2)
4. Add _____ ml. of distilled water to the soil sample. Stir to obtain a soil slurry. (tech 1,2)
5. Take out the pH meter and remove the black foam tip which protects the electrode. Store this tip in the cap so it will not be lost. (tech 3,4)
6. Immediately before immersing the electrode into the sample, stir the sample well with a wooden stick. (tech 3,4)
7. Place the electrode into the soil slurry solution and gently turn beaker to make good contact between the solution and the electrode(s). (tech 3,4) **DO NOT** place electrode into the soil; only into the soil slurry solution. When immersing electrode(s) into the glass beaker, care should be taken not to hit the bottom or side, causing damage to electrode.
8. The electrode requires immersion 30 seconds or longer in the sample before reading to allow the meter to stabilize.
9. Record the pH value on your data sheet to the nearest tenth of a whole number. (tech 3,4)
10. Rinse the electrode(s) well with **distilled water**, then dab lightly with tissues to remove any film formed on the electrode. Caution: Do not wipe the electrode as this may result in polarization of the electrode.

Replace the digital meter on the blue tray for the next group to use

(tech 3,4)

11. Use rinse water in the bucket to rinse your beaker for next sample or to store for the next class. (tech 1,2)