

Digestion Method for Soils

Preparation:

- Turn on the digestion block about 30 minutes before the digestion is to begin.
- Weigh out 0.5000 ± 0.0025 g of soil
- Add three Hengar boiling chips

Digestion:

1. Pipet in 5mL of H_2SO_4 /Salicylic acid
Pipet 2mL of H_2O_2 0.5mL at a time

Put the tubes on the block when it is under $300^\circ C$

The tubes stay at $320^\circ C$ for 15 minutes

Remove rack from the block

Cool for 20 minutes

2. Add 1.5 mL H_2O_2
Repeat procedure as in step 1
3. Add 1.5mL of H_2O_2
Repeat procedure as in step 1
4. Add 1.0 mL of H_2O_2
Repeat procedure as in step 1
5. Add 0.5mL of H_2O_2
Repeat procedure as in step 1

** If the samples are not clear at this point, repeat step 5, by adding 0.5mL H_2O_2 .

6. Turn off block completely
7. Once the tubes have cooled for at least 30min, slowly add ~50mL of DI to each tube using the large pipettor.
8. Allow the tubes to cool completely (overnight or for several hours). Tubes cool quicker in the hood.
9. Top off tubes to 75mL calibration mark with DI. Cover with stopper and invert 5 times.
10. Allow the tubes to cool for at least an hour. Do not invert again!! The digestate should be clear, and there will be white gunk on the bottom
11. Pour enough digestate to half fill a scintillation vial, cover with a cap and shake several times. Pour this into the waste bucket.
12. Pour enough digestate into a scintillation vial to almost fill it, swirl and pour out.
13. **This is your sample:** Fill a scintillation vial with the digestate (third quarter of the sample) and cap. Mark with sticker or sharpie.