

Plutonium subsampling and submission information

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Following is our sampling strategy in January 2007 for Big Round Lake surface core samples. Contact M. Ketterer before sampling and sending samples. He will help determine sample size, number and price. Also, reach attached email conversations for more details on Pu analyses.

You will need:

Many sheets of 8.5x11" printer paper
A few sheets of weighing paper
15 ml glass vials (one per sample plus five extra for sample blanks)
The precise balance
Freeze-dried sediment
Metal spatula/scoop
Spreadsheet to record sample name, sample weight and capsule location in sample tray
A bunch of small Kimwipes
DI H₂O in a squirt bottle
Wear gloves!

1. Place a sheet of 8.5x11" printer paper next to the balance. Change paper in between each sample. This will help prevent cross-contamination in these tiny samples.
2. Place a sheet of weighing paper on the balance. Again, this is to keep things clean between each sample. You don't have to replace this each time, just be sure you shake it off well between samples and replace it if it refuses to be clean.
3. Label the vials with the sample name and depth.
4. Place an empty vial without the top on the weighing paper in the balance.
5. Tare the balance.
6. Remove vial from the balance and place them on the printer paper.
7. Using the metal spatula, place ~500 mg sediment in the vial.
8. Place the vial back on the balance. If there is less than 500 mg of sediment, remove the vial from the balance and add more sediment.
9. When there is at least 500 mg of sediment in the vial, record the weight on your spreadsheet.
10. Cap the vial.
11. Write the weight of the sample on the vial.
12. Put the sediment baggie or bottle away.
13. Clean the metal spatula with DI H₂O and a kimwipe.
14. Place a clean sheet of 8.5x11" printer paper next to the balance.
15. Repeat steps 3-15 for all of your samples.
16. Send weighed, labeled samples, along with FIVE IDENTICAL EMPTY GLASS VIALS to Ketterer.

An 8 cm profile (16 samples) was good for Big Round Lake, but more samples would be needed for a lake with higher sedimentation rate. Ketterer charged us \$37.50 per sample (\$12.50 cheaper than normal).