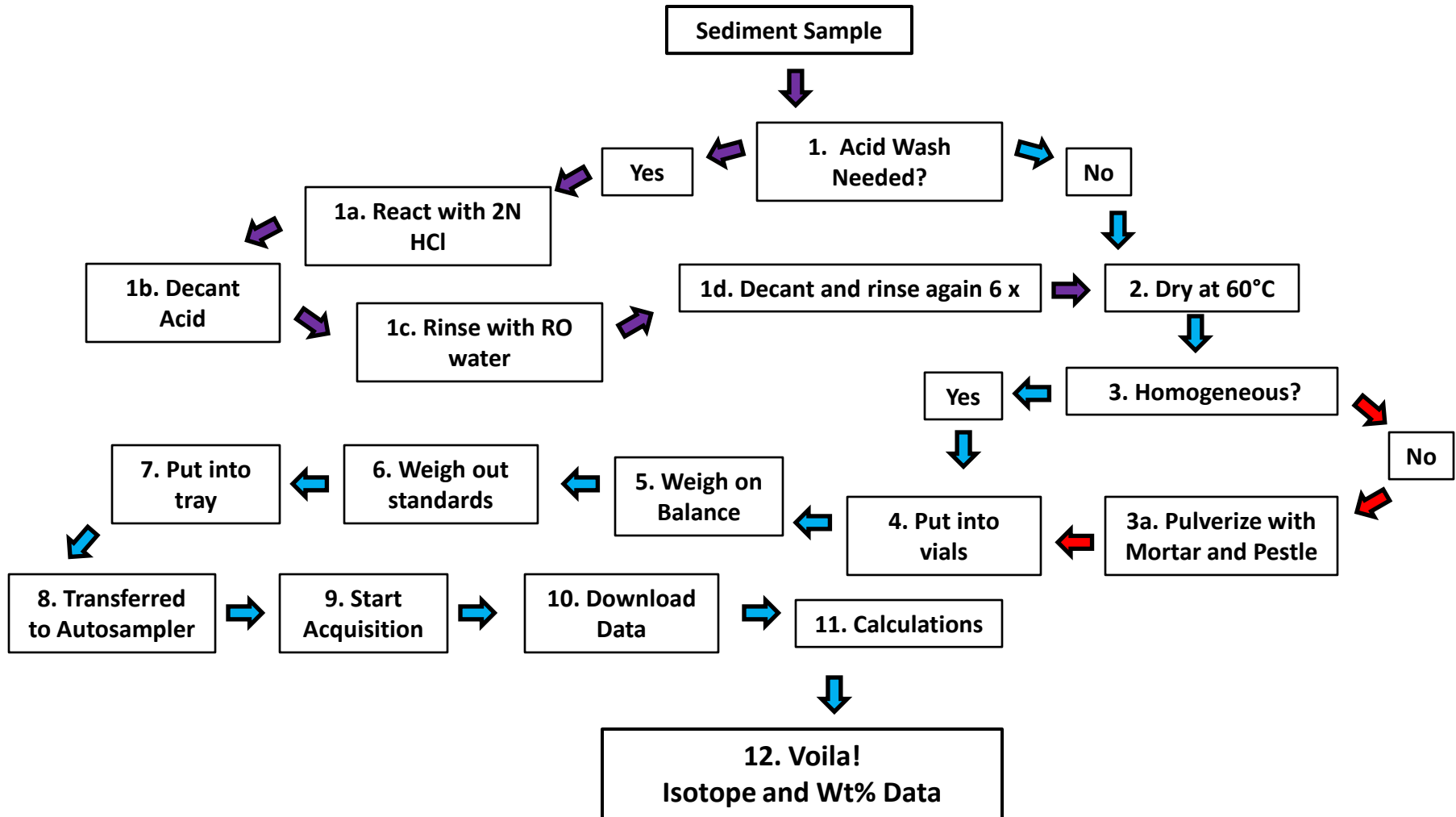


A Sediment Samples Journey through the Hamilton Isotope Lab



Sediment Sample Flow Chart Defined:

1. Acid Wash Needed?

1a. Yes: React with 2N HCL - Sediment samples are put into a beaker and are treated with 2N HCl for 24 hrs to remove organic carbon.

1b. Decant Acid - After 24 hrs, the samples are decanted.

1c. Rinse with RO water - About 75 ml of RO water is put into the beaker, stirred, and left to sit for 24 hours or until all sediment has deposited on the bottom.

1d. Decant and rinse again 6X - The previous step is repeated 6 times until all the acid is gone.

2. Dry at 60 °C - Place the decanted sample in an oven at 60 ° C for 24 hours to evaporate any leftover liquid.

3. Homogenous?

3a. No: Pulverize with Mortar and Pestle- If the sample has lumps or larger particles it needs to be pulverized with a mortar and pestle to ensure uniformity within the sample.

4. Put into vials – Remove from oven and scrape out the dried sediment into vials.

5. Weigh on Balance – Samples are weighed in tin capsules on a Sartorius Balance.

6. Put into tray – Samples are put into a capsule tray to prevent contamination.

7. Transferred to Autosampler – Once there are enough samples ready for a run, and the standards are measured out as well, samples can be transferred to the autosampler.

8. Start Acquisition – Once all sample information is inputted into the computer the run is started.

9. Download Data –After the run is finished the data is downloaded.

10. Calculations – Data is put into an excel spreadsheet to perform calculations.

11. Voila! Isotope and Weight % data