
Experiment 13 – Weighing by Difference

The purpose of this experiment is to learn how to correctly and accurately use the analytical mass balance.

Procedure

NOTE: Always use the same balance during an experiment and leave it clean.

- A. Check to see if the balance is level by looking at the bubble in the level gauge. If the bubble is not centered, adjust the legs of the balance until the bubble is centered. Use the same balance throughout the experiment.
- B. Place a weighing boat on the balance pan. Zero the balance by pushing down on the tare button or zero button and waiting a few seconds before placing anything on it. Place approximately 3 grams of salt on the boat. Record the exact mass of the salt. Remove the weighing boat and salt from the balance and save them for step D.
- C. Zero the balance. Place a clean dry evaporating dish on the balance pan. Record its mass.
- D. Pour the salt from the weighing boat into the evaporating dish.
- E. Record the mass of the evaporating dish with the salt sample.
- F. Return the salt to its original container. Wipe clean and return the evaporating dish.

Data and Calculations for Experiment 13

1. Mass of salt sample (from step B)	
2. Mass of evaporating dish	
3. Mass of evaporating dish and salt	
4. Mass of salt in evaporating dish (calculate)	
5. Difference between 1 and 4	

Show how you determined 4 and 5.