

Molarity and Dilution

Students will be able to:

- Determine the amount of grams of solute to make a given volume of specified molarity.
- After dilution, determine the molarity of a solution.

Directions:

Part A: Make 100 ml of a 0.08 M solution of NiNH_4SO_4

1. Calculate how many grams of NiNH_4SO_4 you will need.
2. Show your calculation to your teacher for approval.
3. Get a clean 150 ml beaker and put in about 25 ml distilled water.
4. Use a small piece of wax paper to measure your NiNH_4SO_4 .
5. Carefully add your NiNH_4SO_4 to the beaker and use the wash bottle to get all of the particles off the paper. Then stir.
6. Pour your solution into a 100ml volumetric flask. Wash all of the solution out of the beaker into the flask using your wash bottle.
7. Fill the flask to the line using the wash bottle.

Part B: Dilute your solution

1. Pour your solution back into your 150 ml beaker.
2. Measure 10ml of the solution and put it in the 100ml flask.
3. Carefully fill the flask to the 100 ml mark. Put on the lid and gently rotate to stir.
4. Show your calculation to determine the concentration of the Part B solution.
5. Show your teacher both of the solutions and the work for PartB #4 for credit.