

# TITRATION LAB

Lab Day: **Beware!** We are using acids & bases and expensive glassware. Use extra caution.

White Book pages 54-55 Black Book pages 62-63

- Title Every Page Every Time / Signatures Every Page Every Time
- Safety (3 points)
- Lab Objectives (2 points)
- Materials (5 points)
- Lab Set-Up (draw & label setup) (5 points)
- Pre-Lab Questions & Post-Lab Questions (12 points)
- Background Notes (10 points)
  - These notes will be given by teacher. You can leave 1-page blank for these notes.
- Calculations (10 points)
  - We will be working on Calculations together in class. Leave 1-page blank for these calculations.
  - $M_1V_1=M_2V_2$
- Procedure (10 points)
  - <https://www.youtube.com/watch?v=5BZ0MPigeEE>
- Results (20 points)

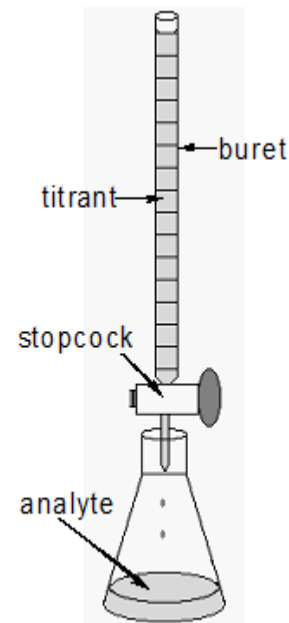


Figure 1: Titration Setup

|                      | $V_2$                                    | $V_1$  | $M_1$  | $M_2$   |                  |                      |
|----------------------|--|--|--|---|------------------|----------------------|
| Trial                | Amount of Acid<br>(initial volume)<br>mL | Amount of NaOH Titrated<br>(look on burette)<br>mL | NaOH molarity<br>(this is given by teacher)<br>M | Acid molarity<br>(solve using formula<br>$M_1V_1=M_2V_2$ )<br>M | Color of Analyte | Notes / Observations |
| #1                   |  |  |  |   |                  |                      |
| #2                   |  |  |  |   |                  |                      |
| #3                   |  |  |  |   |                  |                      |
| NaOH molarity mean = |  |  |  |   |                  |                      |

- Conclusion (10 points)
  - Research using the internet and read the examples listed in the overview about how titrations are used in the real world. Write 5 sentences about how titrations are used in the real world.
- Lab QUIZ (13 points)