

Revised August 2012



HONORS LAB 4g: Stoichiometry Simulations



SIMULATION #1

The computer simulation is located at

<http://bit.ly/xlNu9Z>

Select the following;

- (i) Strong Acid vs. Strong Base
- (ii) Fill the buret with Base
- (iii) HNO₃ as the acid and KOH as the base
- (iv) Phenolphthalein as the indicator

The computer will automatically assign a molarity and volume for the acid.

1. Using the slider, add 10.0 mL of the KOH. The chemical equation is;



2. Titrate to the end point. Getting the exact end point requires care (adding dropwise) and will be reached when there is a permanent pale pink color in the flask. A dark pink color means you have missed the end point and must start over.

3. Fill in the table below.

Molarity of Acid	
Volume of Acid	
Volume of Base	

4. Calculate the molarity of the base, enter this number (to three sig. figs) and click-on "OK".



SIMULATION #2

The computer simulation is located at

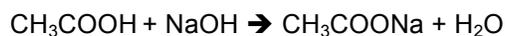
<http://bit.ly/xlnu9Z>

Select the following;

- (i) Weak Acid vs. Strong Base
- (ii) Fill the buret with Base
- (iii) CH₃COOH as the acid and NaOH as the base
- (iv) Phenolphthalein as the indicator

The computer will automatically assign a molarity and volume for the acid.

1. Using the slider, add 10.0 mL of the NaOH. The chemical equation is;



2. Titrate to the end point. Getting the exact end point requires care (adding dropwise) and will be reached when there is a permanent pale pink color in the flask. A dark pink color means you have missed the end point and must start over.
3. Fill in the table below.

Molarity of Acid	
Volume of Acid	
Volume of Base	

4. Calculate the molarity of the base, enter this number (to three sig. figs) and click-on "OK".



SIMULATION #3

The computer simulation is located at

<http://bit.ly/HKlw0H>

1. Select any of the hydrocarbon gases in 'Select Gas'.
2. Balance the equation according to the instructions. Hit SUBMIT.
3. Use the sliders to select the amount of oxygen and the amount of hydrocarbon gas.
4. Hit 'Start the reaction'.
5. BEFORE hitting one of the buttons in #5 to choose moles or grams, calculate the amount of products that will be produced.

AFTER you have performed the calculation, hit one of the buttons in #5 to check your answers.

Repeat the whole process for the other two hydrocarbons that you did not choose the first time around.