


Safety Goggles Are Required Tonight



A Cycle of Copper Reactions

Experiment #5

THIS IS A QUALITATIVE EXPERIMENT

Things NOT to do...

- Eat/drink in lab
- Use the wash bottles for play

- 1 $\text{Cu}_{(s)} + \text{HNO}_{3(aq)} \rightarrow \text{Cu}(\text{NO}_3)_{2(aq)}$
Yellow Color Green Color
- 2 $\text{Cu}(\text{NO}_3)_{2(aq)} + \text{NaOH}_{(aq)} \rightarrow \text{Cu}(\text{OH})_{2(aq)}$
Green Color Blue Color
- 3 $\text{Cu}(\text{OH})_{2(aq)} \xrightarrow{\Delta} \text{CuO}_{(s)}$
Blue Color Brown Color
- 4 $\text{CuO}_{(s)} + \text{H}_2\text{SO}_{4(aq)} \rightarrow \text{CuSO}_{4(aq)}$
Brown Color Blue Color
- 5 $\text{CuSO}_{4(aq)} + \text{Zn}_{(s)} \rightarrow \text{Cu}_{(s)}$
Blue Color Red-Brown Color

Excess

Don't Forget...

- Title
- Objective Procedure
- Observations and Measurements
- Calculations
- Results
- Conclusion
- References

Don't Forget...

- Questions 2, 3 & 4
- If you spill acid or base...
 - **First** go wash with water where it touched you
 - Notify the instructor
 - Continue washing with water