

**Quiz**  
**Chemistry 121**

**Name** \_\_\_\_\_

1. Determine the molar mass to the nearest 100<sup>th</sup> place (two places past the decimal point) for the following compounds:
  - a.  $(\text{NH}_4)_3\text{PO}_4$  ammonium phosphate
  - b.  $(\text{CH}_3)_2\text{CHOH}$  (isopropyl alcohol / rubbing alcohol)
2. Find the percentage:
  - a. **Iron** in iron (III) sulfate  $\text{Fe}_2(\text{SO}_4)_3$
  - b. **Copper** in copper (II) nitrate  $\text{Cu}(\text{NO}_3)_2$
3. Carry out the following conversions:
  - a. 63.9 g NaCl is how many moles?
  - b. 5.4 moles of  $\text{Ba}(\text{OH})_2$  is how many grams?
4. If one mole contains  $6.022 \times 10^{23}$  objects – how many atoms of oxygen are in 4.0 moles of oxygen gas? (note: oxygen is a diatomic molecule).
5. Given the following percentage composition – find the empirical formula:  
38.9% Ba  
29.4% Cr  
31.7% O