Chemistry 115 - Name

Dr. Cary Willard

Quiz 4A (20 points) October 6, 2008

All work must be shown to receive credit.

Avogadro’s number = 6.022 x 1023/mol

1. (8 points) Calculate the empirical formula of a compound that is composed or 55.3% potassium (K), 14.6% phosphorus (P) and 30.1% oxygen (O).
2. (4 points) How many grams of Fe2S3 will contain 7.16 x 1023 atoms of iron (Fe)?
3. (2 points) What are two indicators of a chemical reaction (ie they are evidence that a chemical reaction has taken place.)
4. (6 points) Balance the following chemical reactions by inspection.
   1. SO2 + O2 🡪 SO3
   2. Mg3N2 + H2O 🡪 Mg(OH)2 + NH3

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Avogadro’s number = 6.022 x 1023/mol

1. (8 points) Calculate the empirical formula of a compound that is composed or 38.9% barium (Ba), 29.4% chromium (Cr) and 31.7% oxygen (O).
2. (4 points) How many grams of Fe2S3 will contain 5.28 x 1023 atoms of iron (Fe)?
3. (2 points) What are two indicators of a chemical reaction (ie they are evidence that a chemical reaction has taken place.)
4. (6 points) Balance the following chemical reactions by inspection.
   1. PbO2 🡪 PbO + O2
   2. MnO2 + CO 🡪 Mn2O3 + CO2