Chemistry 115 Name

Dr. Cary Willard

Quiz 5a (20 points) March 8, 2011

All work must be shown to receive credit. Avogadro’s number = 6.022 x 1023/mol

1. (3 points) Determine the molar mass of sodium oxalate, Na2C2O4.
2. (4 points) Calculate the number of formula units of sodium oxalate in 3.64 moles of sodium oxalate.
3. (4 points) Calculate the mass of 5.33 moles of sodium oxalate.
4. (4 points) Calculate the number of atoms of carbon in 55 formula units of sodium oxalate.
5. (5 points) Calculate the empirical formula of a compound that is 35.56% Ni and 64.44% Cl.

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Quiz 5b (20 points) March 8, 2011

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1. (3 points) Determine the molar mass of potassium chromate, K2CrO4.
2. (4 points) Calculate the number of formula units of potassium chromate in 8.94 moles of potassium chromate.
3. (4 points) Calculate the mass of 3.71 moles of potassium chromate.
4. (4 points) Calculate the number of atoms of oxygen in 55 formula units of potassium chromate.
5. (5 points) Calculate the empirical formula of a compound that is 11.31% V and 88.69% Br.

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Quiz 5c (20 points) March 10, 2011

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1. (3 points) Determine the molar mass of magnesium iodate , Mg(IO3)2.
2. (4 points) Calculate the number of moles of magnesium iodate that contains 5.38 x 1021 formula units of magnesium iodate.
3. (4 points) Calculate the number of moles of magnesium iodate in 423 g of magnesium iodate.
4. (4 points) Calculate the number of moles of iodine in 5.33 moles of magnesium iodate.
5. (5 points) Calculate the empirical formula of a compound that is 63.19% Mn and 36.81% O.

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Quiz 5d (20 points) March 10, 2011

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1. (3 points) Determine the molar mass of ammonium sulfide , (NH4)2S.
2. (4 points) Calculate the number of moles of ammonium sulfide that contains 7.66 x 1021 formula units of ammonium sulfide.
3. (4 points) Calculate the number of moles of ammonium sulfide in 423 g of ammonium sulfide.
4. (4 points) Calculate the number of moles of iodine in 8.55 moles of ammonium sulfide.
5. (5 points) Calculate the empirical formula of a compound that is 71.79% Cu and 28.21% As.