Chemistry 115 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Quiz 5a

Dr. Cary Willard March 12, 2014

Avogadro’s number = 6.022 x 1023/mol

1. (4 points) Eugenol, C10H12O2, is a phenylpropanoid that gives clove its characteristic aroma. What is the molar mass of eugenol?
2. (4 points) How many grams of oxygen are in 8.47 mol of eugenol?
3. (4 points) How many atoms of carbon are in 3.28 g of eugenol?
4. (5 points) Calculate the empirical formula of a compound that is composed of 43.64% phosphorus and 56.36% oxygen
5. (3 points) A compound is found to have a molar mass of 70 g/mol and an empirical formula of CH2. What is the molecular formula of this compound?

Molar mass of CH2 = 12+1+1=14. 70/14=5 so molecular formula is (CH2)5 or C5H10

Chemistry 115 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Quiz 5b

Dr. Cary Willard March 12, 2014

Avogadro’s number = 6.022 x 1023/mol

1. (4 points) Eugenol, C10H12O2, is a phenylpropanoid that gives clove its characteristic aroma. What is the molar mass of eugenol?
2. (4 points) How many grams of oxygen are in 3.72 mol of eugenol?
3. (4 points) How many atoms of carbon are in 6.84 g of eugenol?
4. (5 points) Calculate the empirical formula of a compound that is composed of 56.35% phosphorus and 43.65% oxygen
5. (3 points) A compound is found to have a molar mass of 98 g/mol and an empirical formula of CH2. What is the molecular formula of this compound?

Molar mass of CH2 = 12+1+1=14. 98/14=7 so molecular formula is (CH2)7 or C7H14

Chemistry 115 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Quiz 5c

Dr. Cary Willard March 12, 2014

Avogadro’s number = 6.022 x 1023/mol

1. (4 points) Methyl salicylate, C8H8O3, is an organic that gives wintergreen its characteristic aroma. What is the molar mass of methyl salicylate?
2. (4 points) How many grams of oxygen are in 8.47 mol of methyl salicylate?
3. (4 points) How many atoms of carbon are in 3.28 g of methyl salicylate?
4. (5 points) Calculate the empirical formula of a compound that is composed of 76.90% bromine and 23.10% oxygen
5. (3 points) A compound is found to have a molar mass of 70 g/mol and an empirical formula of CH2. What is the molecular formula of this compound?

Molar mass of CH2 = 12+1+1=14. 70/14=5 so molecular formula is (CH2)5 or C5H10

Chemistry 115 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Quiz 5d

Dr. Cary Willard March 12, 2014

Avogadro’s number = 6.022 x 1023/mol

1. (4 points) Methyl salicylate, C8H8O3, is an organic that gives wintergreen its characteristic aroma. What is the molar mass of methyl salicylate?
2. (4 points) How many grams of oxygen are in 3.72 mol of methyl salicylate?
3. (4 points) ) How many atoms of carbon are in 6.84 g of methyl salicylate?
4. (5 points) Calculate the empirical formula of a compound that is composed of 66.64% bromine and 33.36% oxygen
5. (3 points) A compound is found to have a molar mass of 154 g/mol and an empirical formula of CH2. What is the molecular formula of this compound?

Molar mass of CH2 = 12+1+1=14. 154/14=11 so molecular formula is (CH2)11 or C11H22