**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 10/03/22**

**CH 111 Workshop 4 – Chapter 4 Part 2**

1. Solid aluminum is mixed with hydrochloric acid to perform the reaction below.

(A) how many grams of aluminum are required to fully react with 75.0 mL of 2.95 M hydrochloric acid. (B) How many molecules of hydrogen gas are formed in the reaction. (C) How many aluminum ions are produced in the reaction?

1. On combustion analysis an organic compound, C*x*H*y*O*z*, weighing 0.450 g was burned and 0.418 g of H2O and 1.023 g of CO2 were produced. If the molar mass of the compound was found to be 116.2 g/mol, what is the molecular formula of the compound?
2. Calculate the concentration of an HBr solution if 50.00 mL HBr is titrated with 1.50 M . The initial buret reading is 0.21 mL, and the final buret reading is 23.78 mL.
3. A side reaction in the manufacture of rayon from wood pulp is

If 92.5 mL of liquid CS2 (*d* = 1.26 g/mL) are allowed to react with 111.2 g of NaOH, (A) how many grams of Na2CS3 are produced in the reaction? (B) What is the limiting reactant? (C) How many grams of the excess reactant are remaining? (D) A chemist performs the reaction above using the aforementioned amount of and NaOH and has a 94.8 % yield in her production . What is the actual yield of the reaction?