EMPIRICAL FORMULA WORKSHEET

1. What is the empirical formula for a compound that contains 0.0134 g of iron, 0.00769 g of sulfur and 0.0115 g of oxygen?

2. Find the empirical formula for a compound that contains 32.8% chromium and 67.2% chlorine.

3. Name the compound which contains 0.463 g Tl (#81), 0.0544 g of carbon, 0.00685 g of hydrogen and 0.0725 g oxygen by finding its empirical formula.

4. What is the empirical formula for a compound that contains 67.1% zinc and the rest is oxygen?

5. Barry Um has a sample of a compound that weighs 200 grams and contains only carbon, hydrogen, oxygen and nitrogen. By analysis, he finds that it contains 97.56 grams of carbon, 4.878 g of hydrogen, 52.03 g of oxygen and 45.53 g of nitrogen. Find its empirical formula.

6. The characteristic odor of pineapple is due to ethyl butyrate, an organic compound which contains only carbon, hydrogen and oxygen. If a sample of ethyl butyrate is known to contain 0.62069 g of carbon, 0.103448 g of hydrogen and 0.275862 g of oxygen, what is the empirical formula for ethyl butyrate?

7. 300 grams of a compound that contains only carbon, hydrogen and oxygen is analyzed and found to contain the exact same percentage of carbon as it has oxygen. The percentage of hydrogen is known to be 5.98823%. Find the empirical formula of the compound.

8. 200.00 grams of an organic compound is known to contain 83.884 grams of carbon, 10.486 grams of hydrogen, 18.640 grams of oxygen and the rest is nitrogen. What is the empirical formula of the compound?

9. 300 grams of an organic sample that contains only carbon, hydrogen and oxygen is analyzed and found to contain 145.946 grams of carbon, 24.3243 grams of hydrogen and the rest is oxygen. What is the empirical formula for the compound?