

Name _____ Date _____

EMPIRICAL & MOLECULAR FORMULAS

Work on these problems below!

What is the empirical formula for a compound which contains 53.73 % Fe and 46.27 % S?

The molecular mass of a compound is 92 g/mol. Analysis of this compound shows that there are 0.608 g of nitrogen and 1.388 g of oxygen. What are its empirical and molecular formulas?

A fat is composed of long chains of carbon and hydrogen atoms. In a reaction with a strong base, a fat forms a soap and glycerol. What is the empirical formula of a fat containing 77.60 % carbon, 11.45 % oxygen, and 10.95 % hydrogen? What is its molecular formula if its molecular mass is 1253 g/mol?

What is the empirical formula of a compound which contains 15.77 % aluminum, 28.11 % sulfur, and 56.12 % oxygen?

An organic compound is found to contain 92.25 % carbon and 7.75 % hydrogen. If the molecular mass is 78 g/mol, what are its empirical and molecular formulas?