

Name: _____

Empirical Formulas of Compounds

1. A compound of iridium, Ir, and oxygen was produced in a lab by heating iridium in a crucible. The data was collected:

Mass of crucible: 38.26 g

Mass of crucible and iridium: 39.52 g

Mass of crucible and iridium oxide: 39.73 g

a.) Calculate the percent composition of the compound.

b.) What is the empirical formula of this compound?

c.) Is this compound ionic or covalent? _____

d.) Name this compound: _____ * Need Roman Numerals!!!

2. A compound of molybdenum, Mo, and oxygen was produced in a lab by heating molybdenum in a crucible. The data was collected:

Mass of crucible: 23.24 g

Mass of crucible and molybdenum: 24.91 g

Mass of crucible and molybdenum oxide: 25.33 g

b.) Calculate the percent composition of the compound.

e.) What is the empirical formula of this compound?

f.) Is this compound ionic or covalent? _____

g.) Name this compound: _____ * Need Roman Numerals!!!

3. Find the empirical formula of the following compounds:

a.) 63.0 g Rb, 5.90 g O

b.) 0.00495 g Th, 0.00137 g S

c.) 2.13 g Na, 2.32 g As, 1.98 g O

d.) 32.8% Cr, 67.2 % Cl

e.) 58.0% Rb, 9.50% N, 32.5% O

4. The empirical formula of a compound was found to be C_4H_6O . This compound has a molecular mass of 210 g/mol. What is the compound's molecular formula?