

"TRY YOURSELF" PROBLEMS FROM STUDY SECTION 2.8

Try Yourself 2.18

What is the percent composition of Cl in $\text{Pt}(\text{NH}_3)_2\text{Cl}_2$?

Try Yourself 2.19

What mass of lead is present in 10.0 g of PbS ?

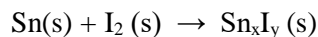
Try Yourself 2.20

Eugenol is the major component in oil of cloves. It has a molar mass of 164.2 g/mol and is 73.14% C and 7.37% H; the remainder is oxygen. Calculate the empirical and molecular formulas of eugenol.

Try Yourself 2.21

Formula from mass (data from lab experiments)

Tin metal (Sn) and purple iodine (I_2) combine to form orange, solid tin iodide with an unknown formula.



Mass of Sn reacted = 0.455 g

Mass of I_2 reacted = 1.947 g

Calculate the values of x and y (in other words calculate the formula of the compound).

Try Yourself 2.22

Elemental sulfur (1.256 g) is combined with fluorine, F_2 , to give a compound with the formula SF_x , a very stable, colorless gas. If you have isolated 5.722 g of SF_x , what is the value of x ?

Try Yourself 2.23

Given $\text{RuCl}_3 \cdot x\text{H}_2\text{O}$

If you heat 1.056 g of the hydrated salt and find that only 0.838 g of RuCl_3 remains when all of the water has been driven off. Calculate the value of x from this information.