

Empirical and Molecular Formulas Worksheet

Objectives:

- be able to calculate empirical and molecular formulas

Empirical Formula

- 1) What is the empirical formula of a compound that contains 0.783g of Carbon, 0.196g of Hydrogen and 0.521g of Oxygen?
- 2) What is empirical formula of a compound which consists of 89.14% Au and 10.80% of O?
- 3) What is empirical formula if compound consists of 21.2%N, 6.1%H, 24.2%S and 48.5%O?

Molecular Formula

- 4) Empirical formula of a substance is CH_2O . Molar mass is 180. What is the molecular formula?
- 5) Sample (3.585g) contains 1.388g of C, 0.345g of H, 1.850g O and its molar mass is 62g. What is molecular formula of this substance?

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| 1. | $\text{C}_2\text{H}_6\text{O}$ |
| 2. | Au_2O_3 |
| 3. | $\text{N}_2\text{H}_8\text{SO}_4$ |
| 4. | $\text{C}_6\text{H}_{12}\text{O}_6$ |
| 5. | $\text{C}_2\text{H}_6\text{O}_2$ |