MEGA LECTURE

Topic 2 Exercise 4 - empirical and molecular formulae

1. A compound contains C 62.08%, H 10.34% and O 27.58% by mass. Find its empirical formula and its molecular formula given that its relative molecular mass is 58.

2. Find the empirical formula of the compound containing C 22.02%, H 4.59% and Br 73.39% by mass.

3. A compound containing 85.71% C and 14.29% H has a relative molecular mass of 56. Find its molecular formula.

4. A compound containing 84.21% carbon and 15.79% hydrogen by mass has a relative molecular mass of 114. Find its molecular formula.

5. Analysis of a hydrocarbon showed that 7.8 g of the hydrocarbon contained 0.6 g of hydrogen and that the relative molecular mass was 78. Find the molecular formula of the hydrocarbon.

6. 3.36 g of iron join with 1.44 g of oxygen in an oxide of iron. What is the empirical formula of the oxide?

7. What is the percentage composition of $SiCl_4$?

8. What is the mass of sulphur in 1 tonne of H_2SO_4?