

Bangladesh International Tutorial
Subject: Chemistry Class VIII Chapter:05

Week 2 Worksheet 1

1. Calculate the percentage of water in copper (II) sulfate crystals ($\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$).
2. Determine the empirical formula of magnesium oxide

Sample results

Mass of crucible + lid = 26.52 g

Mass of crucible + lid + magnesium = 27.72 g

Mass of crucible + lid + magnesium oxide = 28.52 g

Week 2 Worksheet 2

Caffeine is a compound found in coffee and tea. The percentage composition of caffeine is 49.5 % carbon, 5.1 % hydrogen, 16.5 % oxygen and 28.9 % nitrogen. The relative molecular mass of caffeine is 195. Determine

- a) the empirical formula of caffeine
- b) the molecular formula of caffeine

Week 2 Worksheet 3

1. Glycerol contains 39.1 % carbon and 52.2 % oxygen, with the remainder being hydrogen. What is the molecular formula of glycerol? (one mole of glycerol weighs 92.0 g).

2. What is the mass of 1.204×10^{22} atoms of lead? (A_r : Pb = 207)