K Education Centre

GCSE Chemistry C4 - AQA

Chemical Calculations -1

Assignment Questions

C4: Chemical Calculations part -1

(Please refer Periodic Table insert for A_r Values)

Q1: What is relative Atomic mass?

Q2: Calculate the relative atomic mass A_r of Copper with its isotopes ^{63}Cu having abundance of 69 % and ^{65}Cu with 31 % abundance.

Q3: Calculate the relative formula mass of Na_2SO_4 .

Q4 : How many moles of Sulfur atoms are there in 11.6 g of Sulfur.

Q5: Calculate the number of moles present in 14 g of MgF_2 .

Q6: Find the mass of :

a) 0.07 moles of $CaCO_3$

b) 10.1 g of Sulfuric acid

Q7 : Magnesium burns in oxygen to produce Magnesium oxide .

a) Write down a balanced chemical equation for this reaction.

b) What mass of oxygen will react with exact 6.0 g of Magnesium.

Q8: What is limiting reactant?

Q9 : Aluminium reacts with iron (III) oxide , Fe_2O_3 to give iron metal and aluminium oxide , Al_2O_3 .

a) Write balance equation for this reaction.

b) In an experiment 32.0 g of iron (III) oxide was reacted with 16.2 g of Aluminium . Which of these two is the limiting reactant.

c) Calculate the mass of Iron that could be collected at the end of this experiment.