

Exercise 1.33 – Chemical reactions

Q133-01 Which salt is produced by the reaction between sodium hydroxide and nitric acid?

Q133-02 Which salt is produced by the reaction between copper (II) oxide and sulphuric acid?

Q133-03 Which compounds must be reacted together to produce the soluble salt potassium chloride?

Q133-04 Suggest a pair of compounds that could be reacted together to produce the insoluble salt lead (II) bromide.

Q133-05 Suggest a pair of soluble salts that could be mixed to produce a precipitate of silver sulphate.

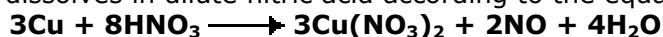
Q133-06 Explain why marble chips (calcium carbonate) do not react very well with sulphuric acid.

Q133-07 Using the concept of displacement, explain why hydrochloric acid reacts with sodium carbonate.

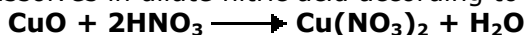
Q133-08 In the displacement reaction of zinc with copper (II) sulphate the zinc dissolves forming zinc sulphate solution. This is also a redox reaction. Which of the species is the oxidising agent?

Q133-09 Anhydrous iron (III) chloride may be prepared by passing chlorine gas over heated iron in a glass tube. How could this reaction be classified.

Q133-10 Copper metal dissolves in dilute nitric acid according to the equation:



Whereas copper (II) oxide dissolves in dilute nitric acid according to the equation:



The first reaction is classified as a redox reaction and the second a neutralisation. Why is this, when both reactions need nitric acid and produce salt (copper (II) nitrate) and water?
