

Question 30**(12 marks)**

Write a balanced ionic equation for any reactions occurring between the following substances and state any observations before and after mixing.

If there is no reaction, write 'no reaction' for the equation and if there is no change observed write 'no visible reaction'. Use the colours stated in the Data booklet if required.

- (a) A piece of iron wool is added to a 0.1 mol L^{-1} solution of copper(II) sulfate. (4 marks)

Equation

Observations

- (b) Calcium hydrogencarbonate powder is added to excess 1 mol L^{-1} nitric acid. (4 marks)

Equation

Observations

- (c) Excess chlorine gas is bubbled through a 0.1 mol L^{-1} sodium bromide solution. (4 marks)

Equation

Observations
