

Group 7 Elements

Question Paper

Level	GCSE
Subject	Chemistry
Exam Board	Edexcel IGCSE
Module	Single Award (Paper 2C)
Topic	Chemistry of the Elements
Sub-Topic	Group 7 Elements - Chlorine, Bromine & Iodine
Booklet	Question Paper

Time Allowed: 14 minutes

Score: /12

Percentage: /100

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	70%	60%	55%	50%	<50%

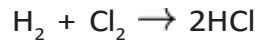
1 Bromine, chlorine, fluorine and iodine are elements in Group 7 of the Periodic Table.

(a) Which two of these elements have the darkest colours?

(1)

..... and.....

(b) The equation for the reaction between hydrogen and chlorine is



Different names are used for the product, depending on its state symbol.

(i) What are the names used for HCl(g) and HCl(aq)?

(2)

HCl(g)

HCl(aq)

(ii) The presence of HCl(g) can be confirmed by adding ammonia (NH₃) gas.

State the observation in the reaction between HCl(g) and ammonia gas and write a chemical equation for the reaction.

(2)

observation

.....

chemical equation

(iii) The presence of chloride ions in HCl(aq) can be shown by mixing it with silver nitrate solution and dilute nitric acid.

State the result of this test and complete the chemical equation for the reaction by adding the state symbols.

(3)

result

.....



(c) Solution X is made by dissolving HCl(g) in water.

Solution Y is made by dissolving HCl(g) in methylbenzene.

A student added magnesium ribbon and blue litmus paper to separate samples of each solution.

The table shows her results.

Test	Solution X	Solution Y
magnesium ribbon added	bubbles	no change
blue litmus paper added	goes red	stays blue

(i) What substance is responsible for the bubbles?

(1)

.....

(ii) State one change to the magnesium ribbon that could be seen after adding it to solution X.

(1)

.....

.....

(iii) What does the colour change of the litmus paper show about solution X?

(1)

.....

.....

(iv) Why does the litmus paper stay blue in solution Y?

(1)

.....

.....

(Total for Question 1 = 12 marks)