

# Group 1 Elements

## Question Paper

Level	GCSE
Subject	Chemistry
Exam Board	Edexcel IGCSE
Module	Single Award (Paper 2C)
Topic	Chemistry of the Elements
Sub-Topic	Group 1 Elements-lithium, sodium & potassium
Booklet	Question Paper

**Time Allowed:** 11 minutes

**Score:** /9

**Percentage:** /100

**Grade Boundaries:**

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

1 A teacher added some of the Group 1 elements to separate samples of water.

(a) State two observations that could be made when a small piece of sodium is added to a large trough containing water.

(2)

1 .....

2 .....

(b) In another experiment she added a small piece of a different Group 1 element and noticed that the reaction was less vigorous.

Which element did she add in this experiment?

(1)

(c) In another experiment she added a small piece of potassium to a large trough containing water. This time she observed a lilac flame.

(i) Identify the gas that burned.

(1)

(ii) Give the formula of the ion that caused the flame to be lilac.

(1)

(d) When the Group 1 elements react with water, each of their atoms loses an electron from its outer shell. For sodium and potassium, these processes can be represented by the equations

- $\text{Na} \rightarrow \text{Na}^+ + \text{e}^-$
- $\text{K} \rightarrow \text{K}^+ + \text{e}^-$

Explain, by referring to the electronic configurations of sodium and potassium, why potassium is more reactive than sodium.

(4)

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**(Total for Question 1 = 9 marks)**