

GCSE Required Practicals

Chemistry

How to write a method...just think of CIDER!

Control variables

Independent variable

Dependent variable

Equipment

Repeats



Chemistry Practical 7 | Identifying ions

Use of chemical tests to identify the ions in unknown single ionic compounds

Choose your equipment

Chemistry Practical 7 | Identifying ions

Use of chemical tests to identify the ions in unknown single ionic compounds

Activity 1 Flame Tests

1. Pour about **1 cm depth of each of the labelled chloride solutions** into five test tubes in the rack.
2. Dip the nichrome wire into the first solution. Then hold the tip of the wire in a **blue Bunsen burner flame**.
3. Record your observation a table.
4. **Clean the wire carefully.**
5. Repeat steps 2–4 for each of the other four solutions.
6. Empty and **clean the test tubes.**

Activity 2 Carbonate test

1. Pour about **1 cm depth of each of the labelled sodium solutions** into five test tubes in the rack.
2. Place **1 cm depth of limewater** in a sixth test tube.
3. Add **1 cm depth of dilute hydrochloric acid** to each sodium salt solution in turn.
4. Only if you see bubbles, quickly use the teat pipette to transfer the gas produced to the limewater. You should pipette the gas into the limewater solution. Your teacher may show you how to do this.
5. You will need to take several pipettes of the gas coming off at the surface to get a change in the limewater.
6. Record your results in the first blank row of a table
7. Empty and **clean the test tubes.**

Activity 3 Sulfate test

1. Pour about **1 cm depth of each of the labelled sodium solutions** into five test tubes in the rack.
2. Add **a few drops of dilute hydrochloric acid** to each solution. Then add **1 cm depth of barium chloride** solution.
3. Record your observations in your table.
4. Empty and clean the test tubes.

Activity 4 Halide test

1. Pour about **1 cm depth of each of the labelled sodium solutions** into five test tubes in the rack.
2. **Add a few drops of dilute nitric acid** to each solution. Then **add 1 cm depth of silver nitrate solution.**
3. Record your observations in the 'Halide test' row of your table.

Can you find the CIDER?

Control
Independent
Dependent
Equipment
Repeats



Non-metal ion	Carbonate	Sulfate	Chloride	Bromide	Iodide
Carbonate test					
Sulfate test					
Halide test					

Flame test	Carbonate test	Sulphate test	Halide test

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1. Pour about 1 cm depth of each of the labelled sodium solutions into five **test tubes** in the **rack**.
2. Place 1 cm depth of limewater in a sixth **test tube**.
3. Add 1 cm depth of **dilute hydrochloric acid** to each sodium salt solution in turn.
4. Only if you see bubbles, quickly use the **teat pipette** to transfer the gas produced to the **limewater**. You should **pipette** the gas into the limewater solution. Your teacher may show you how to do this.
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