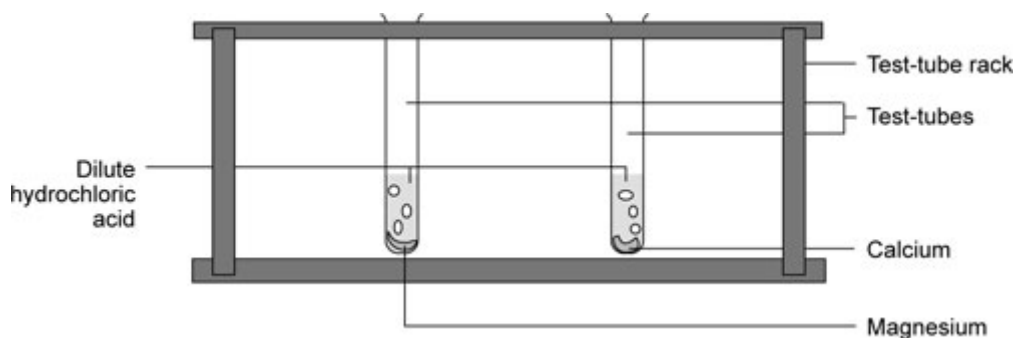


The reactivity of group 2 metals – student sheet

Introduction

Metals in Group 2 of the Periodic Table are less reactive than those in Group 1. This experiment indicates the relative reactivity of elements within the group.



Equipment

Apparatus

- Eye protection
- Test tube rack
- Test tube x 2
- Splint

Chemicals

- Hydrochloric acid 1 mol dm^{-3}
- Magnesium
- Fresh calcium

Health, safety and technical notes

- Read our standard health and safety guidance here <https://rsc.li/3EWrfLG>
- Always wear eye protection.
- Hydrochloric acid is of low hazard, see CLEAPSS Hazcard [HC047a](#).
- Magnesium is pyrophoric and water reactive, see CLEAPSS Hazcard [HC059b](#).
- Calcium is water reactive, see CLEAPSS Hazcard [HC019c](#).

Procedure

1. Fill two test-tubes a quarter with dilute hydrochloric acid.
2. Into one test-tube drop a small piece of magnesium.
3. Into the other, drop a small piece of calcium.
4. Compare the reactivity of the two metals.
5. Drop another bit of magnesium into the first test-tube and put your thumb over the end.
6. When the pressure can be felt, take your thumb off and test the gas with a lighted splint.
7. Record what happens.

Questions

1. Which is the more reactive, magnesium or calcium?
2. Write word equations for these reactions.
3. Write formula equations for these reactions.