



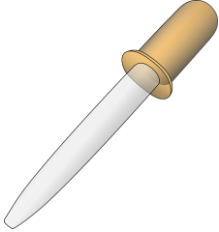
Transition metals

WHAT IS THE AIM OF THIS PRACTICAL?

You will learn the main properties of some transition metals and their compounds.

WHAT DO YOU NEED?

Materials:

Test tubes	Bar magnets	Dropping pipette
		

Chemicals: Samples of some transition metals (copper, iron and zinc) and solutions of:

- Copper(II) sulfate 0.01 M
- Iron(III) chloride 0.1 M
- Ammonia solution 2 M

A BIT OF THEORY

The 38 elements in groups 3 through 12 of the periodic table are called "transition metals".

WHAT DO YOU HAVE TO DO?

1. Test the metal samples for hardness and ability to bend without breaking.
2. Find out which samples are magnetic.
3. Set up an experiment to see if the metals react with water.
4. Take a small sample of a solution of copper(II) sulfate (approximately 2 cm³),

5. Add ammonia solution to it a few drops at a time.
6. Record your observations.
7. Add ammonia solution until there is no further change.
8. Repeat with the other solutions of transition metal compounds.

QUESTIONS

1. Describe the physical properties of transition metals: shiny/dull/ hard/soft, dense/light, malleable? Ductile?
2. How do transition metals react with water? Quickly/slowly
3. What properties do the compounds of transition metals have in common?
They form ionic/covalent/metallic compounds.

FEED-BACK

Evaluate the difficulty of this practical. Circle the number that suits the level of difficulty you found while going through this practical:



Very Easy 1 2 3 4 5 *Very Difficult*



Did you enjoy going through this practical? Circle the number that suits your choice

Not at all 1 2 3 4 5 *Very much*