

Year 11 Chemistry Worksheet 5

Sub-Strand 2.3 Elements Compounds and Mixtures

Day 1

1. What is the difference between a compound and a mixture?
2. The difference between an element and a compound is that an element
 - A. is a diatomic molecule.
 - B. contains only one kind of atom.
 - C. can be separated by physical means.
 - D. is made from more than one kind of atom.
3. Which of the following is not a reversible change?
 - A. burning fuel
 - B. boiling water
 - C. dissolving sugar in water
 - D. mixing alcohol and water

Day 2

4. Heating hydrated copper sulphate is a physical change.



With reference to the above, answer the following questions.

- i. What color are the copper sulphate crystals before they are heated?
- ii. What color are the copper sulphate crystals after they are heated?
- iii. What happens to the crystals when they are heated that causes them to change color?
- iv. Why is this a reversible change?

Day 3

5. Define the following terms:

- i. Element
- ii. Hydrated
- iii. Anhydrous
- iv. Pure chemical

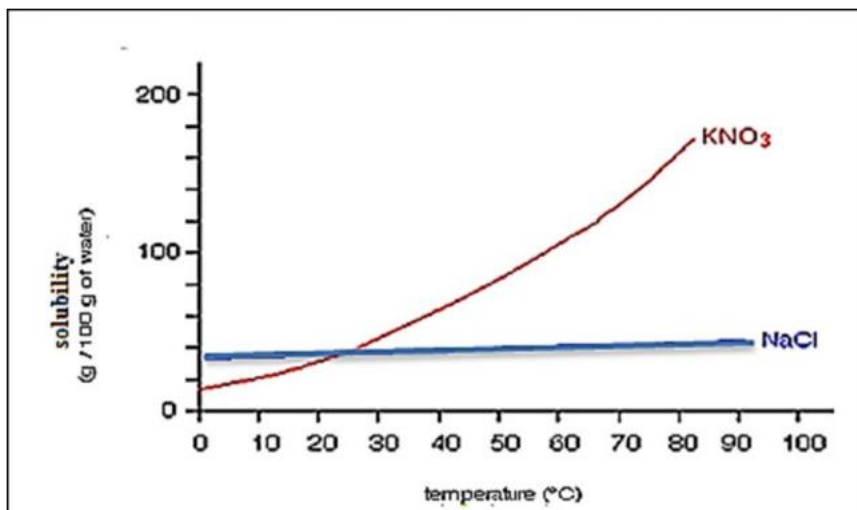
Day 4

6. Briefly describe how you would separate:

- i. Alcohol from a mixture of alcohol and water.
- ii. Salt from a mixture of salt and water.
- iii. Different pigments in the leaves.
- iv. Pure water from sea water
- v. Clean water from a mixture of mud and water.
- vi. Sugar from a mixture of sugar and naphthalene.

Day 5

Consider the graph given below and answer the questions that follow.



Source: <http://www.chemguide.co.uk>

- i. What name is generally given to such graphs?
- ii. Describe the relationship between the solubility of potassium nitrate (KNO₃) and temperature.