EXPERIMENT: To determine the rate of diffusion of particles in a solid and a liquid

Problem statement:

What is the difference in the rate of diffusion between solids and liquids?

Hypothesis:

What is the difference in the rate of diffusion between solids and liquids?

Aim:

To determine the rate of diffusion of copper (II) sulphate in two states of matter.

Variables:

a) Constant variable: Temperature
b) Manipulated variable: Diffusion medium
c) Responding variable: Rate of diffusion

Procedure:

A. Diffusion in a solid

1. Set up the apparatus as shown in Figure 1
2. Observe the changes after two days.
3. Record your observation.

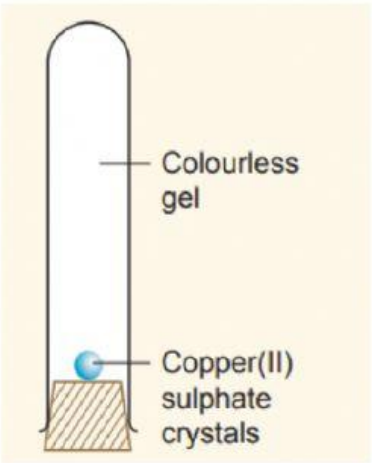


Figure 1

LIVEWORKSHEETS

B. Diffusion in a Liquid

1. Put in one spatula of copper (II) sulphate crystals into a measuring cylinder filled with 50 ml of distilled water (Figure 2).
2. Observe the changes after 15 minutes.
3. Record your observation.

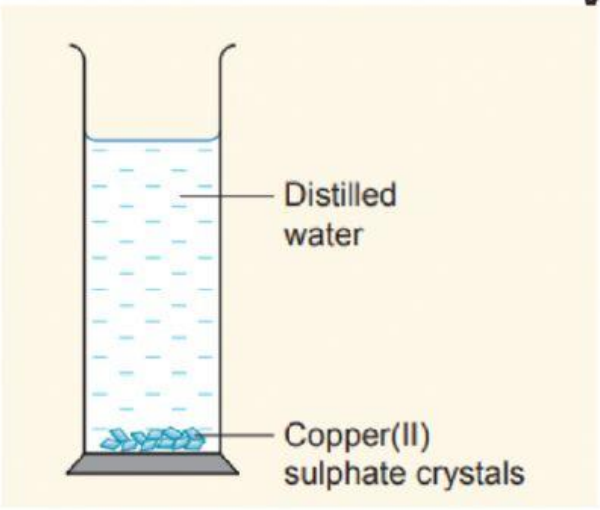


Figure 2

Result:

Activity	Observation
A	The gel turns _____ after a _____ ..... The rate of diffusion of particles in a solid is _____ .....
B	Water turns _____ after _____ ..... The rate of diffusion of particles in a liquid is _____ .....

Conclusion:

The rate of diffusion of particle in a liquid is _____ than the
.....
rate of diffusion of particles in a _____.
.....

Hypothesis is _____.
.....

LIVEWORKSHEETS