

How Can Diffusion be Observed?

The experiment demonstrates the diffusion of a substance across a semi-permeable membrane. Iodine is an indicator of starch. An indicator is a chemical substance that changes color in the presence of the substance it indicates.



Procedure

1. Fill a plastic bag with a teaspoon of cornstarch and then add half a cup of water. Tie to close the bag.
2. Fill a beaker halfway with water and add ten drops of iodine solution to it.
3. Place the bag in the beaker, so the cornstarch mixture is submerged in the iodine solution.
4. Wait for fifteen minutes and record your observations.
 - a) What happened when iodine came into contact with starch?

- b) Why is iodine called an indicator for starch?

- c) Between the bag and the beaker -

- i) Which has more starch concentration?

- ii) Which has more iodine concentration?

- iii) Which one contains a hypertonic solution of iodine?

- iv) Which one contains a hypotonic solution of starch?

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 4. Wait for fifteen minutes and record your observations.
- a) What happened when iodine came into contact with starch?

When iodine comes in contact with starch, it changes its color from brown to blue-black or purple.

- b) Why is iodine called an indicator for starch?

Iodine is an indicator of starch because it changes color from brown to blue-black or purple after a few minutes of diffusion.

- c) Between the bag and the beaker -

- i) Which has more starch concentration?

Bag.

- ii) Which has more iodine concentration?

Beaker.

- iii) Which one contains a hypertonic solution of iodine?

Beaker.

- iv) Which one contains a hypotonic solution of starch?

Beaker.