LAB REPORT

BLUE DYE TEST

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Background

This study aims to determine if a single white rose can survive without its roots by observing if it will absorb the blue dye added to the water where the rose is placed.

Question/Problem

This study aims to determine if a single white rose can survive without its roots by observing if it will absorb the blue dye added to the water where the rose is placed.

Hypothesis

The rose will turn its petal blue before it wilts, proving that plants can survive for a little while without its roots.

Materials

- White rose
- Transparent vase
- Water
- Blue food dye

Procedure

Step 1: Fill 1/2 of the transparent vase with water.
Step 2: Add five drops of blue food dye to the water and mix thoroughly.
Step 3: Place the white rose in the vase.
Step 4: Change the dyed water every two days to ensure the rose's longevity.
Step 5: Trim at least half an inch of stem off the flower before putting it into the glass, and each time you change the water.
Step 6: Observe and note any changes for the next seven days.

Results

The white rose changed its color gradually when its stem was submerged in water with the blue food dye.
The change started from the bottom of the bud, moving up to the tip of the petals.
The stem of the rose has absorbed the dye's color and can be seen whenever the experimenter cuts the stem when replacing the water.

Conclusion

This experiment proves that plants can survive without its roots for at least seven days. The experimenters proved their hypothesis when the stem and the flower turned blue, highlighting that the stem plays a significant role in keeping a plant's moisture and therefore keeping a plant alive.