

TEST FOR STARCH IN PLANTS

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ABSTRACT

This research paper is about the study of starch present in leaves of plants. Green plants absorb light energy using chlorophyll in their leaves. They use it to react carbon dioxide with water to make a sugar called glucose. The glucose is stored in the form of starch .Further starch is used for the respiration purpose. Oxygen is produced as a by-product.This process is called photosynthesis. Temperature, carbon dioxide concentration and light intensity are factors that can limit the rate of photosynthesis. In this experiment we specially study how light intensity factor affects the presence of starch in leaves. Starch is produced during the process of photosynthesis and again it is used for respiration.

Keywords:*Chlorophyll, Glucose, Light Energy, Photosynthesis, Starch.*

I. INRODUCTION

Photosynthesis is a chemical process which takes place in the leaves of plants. In this method of photosynthesis plants produces their food and store it in the form of photosynthesis. During this reaction, carbon dioxide and water are converted into glucose and oxygen. The reaction requires light energy, which is absorbed by a green substance called chlorophyll. Photosynthesis takes place in the leaf cells. These contain chloroplasts, which are tiny objects containing chlorophyll. We are going to study pipal leaf in two conditions: 1)Leaf put in darkness for 24 hours and 2)Leaf on tree which is in light.

II. REQUIREMENTS

1. Leaves (one placed in dark for 24 hours and other which is in sunlight),
- 2.Beakers or glass jars,
- 3.Ethyl Alcohol
- 4.Iodine Crystals
- 5.Potassium Iodide
- 6.Water
- 7.Forceps

III. PROCEDURE

1. Remove green leaf from plant and place it in dark for 24 hours. After 24 hours we are going to study two different leaves one which we placed in dark for 24 hours and another one which we plucked from tree which was in presence of sunlight.
2. Fill the boiler with water and boiled it and place ethanol over it for boiling.
3. Dip the both leaves in boiled water for one minute.
4. Now dip both the leaves in boiled ethanol for some time.
5. Now put 3 to 4 drops of Iodine solution on the leaves which was previously dipped in ethanol.
6. Now observe the difference between both the leaves.

Procedure to make Iodine Solution:

For preparing 100 ml of Iodine solution take 2.54 gm of potassium iodide solution in test tube and moisten it then add 100 ml of water in it and 3 gm of Iodine.

IV. DIAGRAMS



V. CONCLUSION

The hot water kills the leaf and the alcohol breaks down the chlorophyll, taking the green color out of the leaf. When you put iodine on the leaves, one of them will turn blue-black and the other will be a reddish-brown. Iodine is an indicator that turns blue-black in the presence of starch. The leaf that was in the light turns blue-black, which demonstrates that the leaf has been performing photosynthesis and producing starch.

VI. ACKNOWLEDGEMENTS

We consider ourselves fortunate to get Prof. Mansi Ghamande as a guide for our chemistry course project. We thank her for her invaluable guidance. This project would have been difficult without the guidance of Ghamande madam. We are thankful to our college and the department for giving us the opportunity to do something new.

Thus, we thank Honourable Director Dr. Rajesh Jalenekar and Dr. C.M. Mahajan, H.O.D. DESH for their support for our project.

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