How Does Ambient Humidity Affect the Ability of Pisum sativum var. Marcrocarpons (Sugar Peas) to Perform Photosynthesis?

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The purpose of this experiment was to explore the effect that ambient humidity has on the ability of Pisum Sativum var. Marcrocarpons (sugar peas) to Perform Photosynthesis. The Hypothesis that was formulated based on prior research was that When Pisum Sativum var. Marcrocarpons are subjected to varying amounts of humidity, They will perform photosynthesis better when the ambient humidity is at a higher percent. Due to an increase in stomatal aperture on the bottom of the leaf, allowing for more CO2 to flow into the leaf. Inturn allowing the plant to perform photosynthesis at a more efficient rate. There were four rounds of testing, each containing three treatments and a control. Each treatment contained ten trials. To Measure photosynthesis, The O2 produced by the plants was measured using a Vernier O2 Sensor. To do this a Measurement chamber was constructed in which the humidity and climate could be controlled. There was a spot on the top of the chamber that allowed for the O2 sensor to take its readings. After the experiment was completed and the raw data was analyzed, it was evident that the raw data supported the hypothesis. The Raw data was then run through a statistical analysis known as an ANOVA test. The ANOVA test returns a value Known as the P-value, which represents the percent chance that the data was up to random chance. The ANOVA test returned a P-Value of 1.1102e-16 for both the rounds of testing.

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