

Plant Monitoring Report

Plant ID: 101

Date: 2024-12-16

Summary

This report provides a detailed analysis of the plant monitoring data for plant ID 101. The data covers the period from N/A to N/A.

Averages

Parameter	Average Value	Unit
Ph	5.99	
Light	250.82	μmol/m²/s
Soil_moisture	25.49	%
Temperature	47.52	°C

Trends

The following trends have been observed in the data:

- Ph: increasing
- Light: increasing
- Soil_moisture: increasing
- Temperature: decreasing

Anomalies

Detected anomalies are listed below with their corresponding timestamps:

Ph: 0 anomalies detected

Light: 0 anomalies detected

Soil_moisture: 0 anomalies detected

Temperature: 1 anomalies detected

Value: 30.0, Timestamp: 2024-12-10T16:49:34Z

Comparisons

Comparison of plant data with other plants in the room data (if applicable):

- Light: Difference = 0.00 $\mu\text{mol}/\text{m}^2/\text{s}$
- Temperature: Difference = 0.00 $^{\circ}\text{C}$

Correlations

The following correlations between different parameters were found:

- Ph and Light: Correlation = 0.91
- Ph and Soil_moisture: Correlation = 0.75
- Ph and Temperature: Correlation = -0.76
- Light and Soil_moisture: Correlation = 0.74
- Light and Temperature: Correlation = -0.80
- Soil_moisture and Temperature: Correlation = -0.66

Daily Summary

Date	Parameter	Average Value	Unit
2024-12-10	Ph	5.99	
2024-12-10	Light	250.82	$\mu\text{mol}/\text{m}^2/\text{s}$
2024-12-10	Soil_moisture	25.49	%
2024-12-10	Temperature	47.52	$^{\circ}\text{C}$

Insights

1. Key Findings:

- There are consistent increasing trends in light and soil moisture levels.
- The temperature is experiencing a decreasing trend.
- pH and soil moisture levels have no recorded data.
- The temperature has one recorded anomaly.

2. Actionable Insights:

- Maintain and adjust the light levels to optimize lettuce growth and prevent potential burning.
- Monitor and adjust the soil moisture levels to ensure an optimal range for lettuce growth.
- Since there is no recorded data for pH and soil moisture, install pH and moisture sensors to accurately monitor and adjust these levels.
- Investigate the cause of the single temperature anomaly to ensure that it does not become a recurring issue.

- Adjust temperature control mechanisms (if applicable) to maintain an optimal temperature range for lettuce growth.

3. Potential Issues:

- The absence of data for pH and soil moisture levels may mask potential problems with growing conditions.
- The temperature anomaly could be indicative of an underlying issue with temperature control mechanisms or environmental conditions.
- The decreasing temperature trend may be detrimental to lettuce growth if it is outside of the optimal temperature range.
- The increasing light trend may be beneficial for lettuce growth, but increasing beyond the optimal range can be detrimental. Regularly monitor light levels to avoid overexposure.