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| [**Home**](http://docs.google.com/home.htm)  [**Abstract**](http://docs.google.com/abstract.htm)  [**Introduction**](http://docs.google.com/introduction.htm)  [**Review of Literature**](http://docs.google.com/literature_review.htm)  [**Procedure**](http://docs.google.com/procedure.htm)  [**Data**](http://docs.google.com/data.htm)  [**Conclusion**](http://docs.google.com/conclusion.htm)  [**Cross Sections**](http://docs.google.com/cross_sections.htm)  [**Journal**](http://docs.google.com/journal.htm)  [**References**](http://docs.google.com/references.htm)  [**bonus..**](http://docs.google.com/bonus.htm)**.** |  | Day 9   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | cell | Control | cell | Low | cell | Medium | cell | High | | 1 | 4 | 1.12 | 3 | 1.23 | 5 | 1.63 | 4 | 1.20 | | 2 | 2 | 0.93 | 4 | 1.35 | 6 | - | 3 | - | | 3 | 1 | 1.75 | 3 | - | 3 | - | 3 | 1.50,1.57 | | 4 | 6 | 1.44 | 5 | 1.05 | 1 | 1.52,1.29 | 5 | 1.08 | | 5 | 6 | 1.5 | 5 | 1.57 | 3 | 1.19 | 6 | 1.65 | | 6 | 2 | - | 1 | - | 4 | 1.80 | 2 | 1.42 | | 7 | 5 | 1.23 | 3 | - | 3 | - | 5 | 1.55 | | 8 | 2 | 0.97,1.34 | 3 | 1.13 | 5 | 1.48 | 3 | 1.37 | | 9 | 1 | - | 2 | 1.06 | 3 | 1.46 | 3 | 1.65 | | 10 | 5 | 1.55 | 2 | 1.35 | 2 | 1.33 | 2 | - | | 11 | 2 | 1.23,1.34 | 2 | 1.20 | 4 | 1.40,1.59 | 1 | 1.52,1.55 | | 12 | 4 | 1.44 | 5 | 1.24 | 4 | 1.50 | 3 | 1.60 | | 13 | 5 | 1.70 | 3 | - | 5 | 1.31 | 4 | - | | 14 | 6 | 1.45 | 2 | - | 5 | - | 1 | 1.54 | | 15 | 3 | - | 5 | 1.42 | 3 | - | 4 | 1.33 | | 16 | 1 | 1.30 | 6 | 1.30 | 6 | 1.10 | 1 | 1.49,1.52 |   \* The cell number is randomly chosen through the use of a TI-83 plus calculator's random number generator. The cells are labeled and then randint (1,6) selects which cell's stem diameter is then recorded.  **\*** measurements are taken in mm using a micrometer.    Control:  Mean – 1.3527 Standard deviation - 0.2354 Number – 15  5 number summary: Min – 0.93 Q1 – 1.23 Med – 1.34 Q3 – 1.5 Max – 1.75  Low:  Mean – 1.2646 Standard Deviation – 0.1566 Number – 11  5 number summary: Min – 1.05 Q1 – 1.13 Med – 1.24 Q3 – 1.35 Max – 1.57  Medium:  Mean – 1.4583 Standard Deviation - 0.1684 Number – 13  5 number summary: Min – 1.19 Q1 – 1.32 Med – 1.47 Q3 – 1.555 Max – 1.8  High:  Mean – 1.4713 Standard Deviation – 0.1526 Number – 16  5 number summary: Min – 1.3 Q1 – 1.395 Med – 1.52 Q3 – 1.56 Max – 1.65  Comparison of diameter between Wind Speeds  Chart of probabilities\*   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Y X | Control | Low | Medium | High | | Control | N / A | 0.863 | 0.1663 | 0.0234 | | Low | 0.1327 | N / A | 0.0132 | 0.000315 | | Medium | 0.8337 | 0.9864 | N / A | 0.1452 | | High | 0.9766 | 0.9997 | 0.8548 | N / A |   \*probability that X is greater than Y by chance alone  significant probability levels are highlighted in green  Calculations use the statistics formula for calculating using 2-sample T test. Table and formulas can be found in Appendix. No outliers were included in the tests.  T-Tests  Checks:   1. SRS – given 2. population normal or N>30. see box plots 3. standard deviation given – no, use T statistics for test   Significance level set at 5%   |  |  |  |  | | --- | --- | --- | --- | |  | T value | Probability | Degree of Freedom | | Low > Control | -1.1188 | 0.8628 | 23.773 | | Medium > Control | 0.9875 | 0.1663 | 25.814 | | High > Control | 2.1128 | 0.0234 | 20.843 | | Control > Low | 1.1188 | 0.1372 | 23.7723 | | Medium > Low | 2.3665 | 0.0136 | 21.995 | | High > Low | 4.1138 | 0.000315 | 18.3295 | | Control > Medium | -0.9875 | 0.8337 | 25.814 | | Low > Medium | -2.9864 | 0.9864 | 21.995 | | High > Medium | 1.0861 | 0.1452 | 20.007 | | Control > High | -2.113 | 0.9766 | 20.843 | | Low > High | -4.1138 | 0.9997 | 18.3295 | | Medium > High | -1.086 | 0.8548 | 20.007 |   \* Probability represents the probability that the event occurred by chance alone.  \* Corresponding probability for T value can be found in Table C in Appendix.  [Day 9](http://docs.google.com/diameter9.htm)   [Day 10](http://docs.google.com/diameter10.htm)    [Day 11](http://docs.google.com/diameter11.htm) |