**BIO 475 – Lab Data Analysis *Guidelines & Rubric***

Comparisons of Mycorrhizal Properties from Two Host Species

**GUIDELINES**

This analysis accompanies your group lab presentation and should be concisely written using a scientific report format that includes: a title, study question(s), hypothesis(-es), materials and methods, procedures, results, interpretations of results based on Questions 6a-f in the Lab Overview, and overall conclusions. Make sure that all sporocarp identifications and numbers, morphotype descriptions, and measures of colonization and Shannon diversity are included in the results section. Also include your null and alternate hypotheses, the p-value used, and t-test results in that section. In addition, graphs and table that portray your data are to be included in the results section. The following rubric will be used to assess your group. Keep the grading scales in mind when writing and feel free to speak with your instructor about any questions you may have.

**RUBRIC**

**Points Lab Content & Experiment**

\_\_\_\_\_ A title and relevant research question(s) are provided

3 = complete, 2 = mostly complete, 1 = incomplete, 0 = missing

\_\_\_\_\_ A relevant hypothesis is provided

3 = complete, 2 = mostly complete, 1 = incomplete, 0 = missing

\_\_\_\_\_ Materials, methods, and procedures are clear and concise, yet thorough

3 = complete, 2 = mostly complete, 1 = incomplete, 0 = missing

\_\_\_\_\_ All results are clear and complete for all variables measured

3 = complete, 2 = mostly complete, 1 = incomplete, 0 = missing

*Specific results include:*

\_\_\_\_\_ Sporocarps are described and counted

3 = complete, 2 = mostly complete, 1 = incomplete, 0 = missing

\_\_\_\_\_ Morphotypes are described completely

3 = complete, 2 = mostly complete, 1 = incomplete, 0 = missing

\_\_\_\_\_ Total colonized root tip number calculations are made and are correct

3 = complete/correct, 2 = partially complete/correct, 1 = incomplete/correct, 0 = missing

\_\_\_\_\_ Percent colonization by morphotype calculations are made and are correct

3 = complete/correct, 2 = partially complete/correct, 1 = incomplete/correct, 0 = missing

\_\_\_\_\_ Total percent colonization calculations are made and are correct

3 = complete/correct, 2 = partially complete/correct, 1 = incomplete/correct, 0 = missing

\_\_\_\_\_ t-test results are made and are interpreted correctly

3 = complete/correct, 2 = partially complete/correct, 1 = incomplete/correct, 0 = missing

\_\_\_\_\_ Shannon diversity calculations are made and are interpreted correctly

3 = complete/correct, 2 = partially complete/correct, 1 = incomplete/correct, 0 = missing

\_\_\_\_\_ Relevant graphs and/or tables of results are provided

3 = complete/correct, 2 = partially complete/correct, 1 = incomplete/correct, 0 = missing

\_\_\_\_\_ Interpretations of Questions 6 a-f are integrated into overall conclusions.

For these six questions, a 5 point scale is used to assess answer quality: 5 = excellent, 4

= very good, 3 = good, 2 = fair, 1 = poor, 0 = no answer provided; 6 questions x 5 possible points = 30

total possible points).

**Points Writing & Grammar**

\_\_\_\_\_ Writing was clear, concise, and flowed well

3 = consistently, 2 = fairly consistently, 1 = was often not consistent, 0 = rarely or was not

\_\_\_\_\_ A consistent narrative voice was incorporated

3 = consistently, 2 = fairly consistently, 1 = was often not consistent, 0 = rarely or was not

\_\_\_\_\_ Word choice appropriate for a science report was used

3 = consistently, 2 = fairly consistently, 1 = was often not consistent, 0 = rarely or was not

\_\_\_\_\_ Spelling and grammar were correct

3 = consistently, 2 = fairly consistently, 1 = was often not consistent, 0 = rarely or was not

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**Total points earned** (out of 78 possible) \_\_\_\_\_\_\_\_\_\_