Full Extended Lab Write-up of Diels Alder Experiments

Title

The title should be descriptive of the entire project, not just simply "Diels-Alder Experiments".

Introduction

The introduction shows the reader why the research being conducted is interesting and relevant. It should give the background and motivation for the experiment and give a ***general*** mechanism (make sure to number your carbon atoms). A historical account describing previous research should be included. For example, who are Diels and Alder, why was their research important, what types of compounds do Diels-Alder reactions make (generally and name some example classes of compounds synthesized), and why have we synthesized these molecules using the Diels-Alder reaction. Also think in general terms of whether or not the reactions are reversible, what is lost during the reaction, how many steps are typically involved, the conformational requirement for the diene and/or dienophile, etc. It is the author's responsibility to use the introduction to convince other chemists of the value of this work. Present and past tenses are correct in the introduction.

Experimental Section

This section should contain the ***revised*** experimental section that you have already turned in. You **MUST** attach your original experimental section to the back of the full report.

Results and Discussion

The section summarizes the data you have collected and should give correct mechanisms for all reactions. Remember, mechanisms are not net reactions, but instead show electron movement! You should explain what was observed and why the reactions occurred using fundamental chemical principles. Also, explain the similarities and differences (compare and contrast) between the different reactants, solvents used, and where addition occurs (and why). Others questions to consider include "What did the reactions have in common (same diene, dienophile or solvent)?", "What reaction conditions were necessary (neat or solvent used, with or without heat, was time a factor?)", and "Why did addition occur where it did (is the molecule planar or nonplanar, is resonance a factor, are any products resonance stabilized)?" It is your responsibility to convince other interested chemists that the conclusions you draw are valid and make sense based on the data presented in the paper. Please note, this is **NOT** a restating of the experimental section. Instead, you should be examining the theory and applying it to what you did and learned experimentally.

Conclusions

The conclusions state the relevance, importance, and significance of the results and express what was learned in terms of fundamental principles.

References

Any reference to previous work or literature values **MUST** be cited.

Remember:

Spell check
Proofread your work; have a friend read it-spell check!
Do **NOT** paste your structures or mechanisms from any website
Avoid chit-chat
This is your own work, not a group project.
Make sure to review your labs and to reference properly!
Make sure all labs on this subject have been references-reference Kilway, not Williamson.
References should be included in the document (internal) and at the end in a “References” section.
Do not use Wikipedia!
Do not refer to the Diels-Alder reaction as the “Mona Lisa” of reactions!
Make sure each figure, take or mechanism has a caption.
The Nobel Prize in Chemistry is not the Nobel Peace Prize in Chemistry.
Diels-Alder is capitalized and dashed.