

| <i>Criteria</i> | Excellent | Good | Fair | Unacceptable |
|-------------------------------|--|--|--|--|
| Overall appearance | [2 pt] Title page is properly formatted, and includes: lab title, author's name, partner's name, campus mailbox, date, day of the week for lab, and instructors name | [1 pt] Title page not properly formatted, or one or two required elements missing. | [0.5 pt] Title page is not properly formatted; more than two required elements missing | [0 pt] No title page. |
| Grammar, spelling and clarity | [3 pts] No spelling or grammatical errors; report is neat and legible | [2 pts] Minor spelling or grammatical errors, or tables and figures labels have minor problems. | [0.5 pt] Some spelling and grammatical errors; tables and figures are not properly labeled | [0 pt] Spelling and grammatical errors are distracting; no figures |
| Spectral Interpretation | [6 pts] Both IR and ^1H NMR spectra are attached and analyzed* | [3 pts] Both IR and ^1H NMR spectra are attached, but are improperly analyzed* | [1 pt] IR and ^1H NMR spectra are attached but one or both do not include spectral analysis | [0 pt] Spectra are not attached |
| Question #1 | [5 pts] Discussion includes accurately predicted regiochemistry including evidence based on ^1H NMR data; correct structures are included (one bonus point for correct stereochemical assignments for Markovnikov products) | [3 pts] Discussion includes accurately predicted regiochemistry but lacks evidence based on ^1H NMR data or incorrect structures are included | [3 pts] Discussion does not address regiochemistry and incorrect structures are included | [0 pt] No answer |
| Question #2 | [5 pts] Discussion includes evidence based on the correct ^1H NMR data | [3 pts] Discussion includes evidence based on ^1H NMR data, but incorrect peaks are identified | [1 pt] Discussion lacks detail or is grossly incorrect | [0 pt] No answer |
| Question #3 | [5 pts] Discussion includes potential pitfalls of one or more steps in the reaction performed in lab with proper evidence | [3 pts] Discussion includes potential pitfalls of one or more steps in the reaction performed in lab but no evidence for that fault is present in discussion | [1 pts] Discussion lacks detail or is grossly incorrect | [0 pt] No answer |
| Notebook entry formatting | [2 pts] Notebook entry has title, date, page numbers, and is signed by the student and initialed or signed by instructor | [1 pt] Notebook entry is missing one or two of: the title, date, page numbers, or signatures. | [0.5 pt] Notebook entry is missing three or more of: the title, date, page numbers, or signatures. | [0 pt] The notebook entry was not included. |
| Notebook entry | [2 pts] The notebook has a description of the procedure that was actually performed. | [1 pt] The notebook has a partial description of what was done, but has gaps. | [0.5 pt] The notebook entry does not include information as to how the unknowns were identified. | [0 pt] The notebook entry was not included. |

*Analysis of the ^1H spectrum, involves an acceptable drawing of the product on the spectrum that is labeled, and relevant peaks should be assigned. Analysis of the IR spectrum includes assignment of relevant bands for major functional groups.